Jebel Qa'aqir, see Dever (1972, 1981); Gitin (1975); Smith (1982); London (1985, 1987); Horwitz (1989b). For bibliography on other and more recent cemetery sites, see for Western Palestine, Dever (1992b); Finkelstein (1991). For Transjordan, see Palumbo (1991); Palumbo and Peterman (1993) and full references there.

9. Palumbo (1991) provides the latest and most comprehensive synthesis of EB IV, but it is written largely from the perspective of Transjordan (below). Palumbo's principal contention that elite social status at Jericho is reflected in the flexed burials is an interesting suggestion, but it does not seem entirely convincing. Why flexed burials? What would be the connection with status? Other factors in these variables may be involved, as Palumbo (1987: 47) himself notes in other connections.

10. For references on Jebel Qa'aqir, see n. 8 above.

11. Kenyon (1960: 180–85) had already advanced the idea that her differing assemblages, or 'tomb groups', at Jericho could be correlated with basically 'tribal' entities. She did not, however, elaborate on this theory, or document it with general bibliography and ethnographic data on pastoral nomadism. For the latter, see Dever (1977, 1980); Bates and Lees (1977); Prag (1984, 1985); Castillo (1987); Finkelstein and Perevolotsky (1990), all with references to wider literature.

12. See Dever (1971: 208, 1972: 232). The evidence consists of 1. regularly spaced groups of contemporary tombs; 2. clear indications from weather of tool-marks of summer-only usage; 3. specially prepared features that are not in fact employed by those using the tombs, such as lamp and body niches.

13. These distinctive 'bottles', characteristic of tombs in my Central Hills/Jericho families, also occur sporadically in domestic contexts; see Dever 1972: 233. This simply underlines the overlap of tomb and domestic assemblages, as expected (contra the oft-repeated statements of some scholars).

14. For the view that the Palestinian painted and wheelmade 'caliciform' vessels are Syrian imports, see Dever (1980: 46, 47, 50–2); and contrast Tadmor (1978: 20), who is noncommital.

15. For Be'er Resisim, see Cohen and Dever (1978; 1979; 1981); Dever (1985b).

16. For orientation to the literature on 'rank-size' hierarchies – usually three- or even four-tiered in urban societies – see Paynter (1985).

17. It would seem obvious that the architectural plan of individual units and overall village-town layout – i.e., the conception and use of space – could be expected to reflect social values and social structure. For the explicit rationale, however, see Chang (1968); Hodder and Orton (1976); Redman (1978); Vita-Finzi (1978); Hodder (1985: 34–54; 129–34); Trigger (1989: 279–88). Willey (1953: 1), who pioneered settlement pattern studies, says that such analyses are 'a strategic starting point for the functional interpretation of archaeological cultures ... they reflect the environment, the level of technology on which the builders operated, and various institutions of social action and control which the culture intended.' Structuralists in recent archaeology, as expected, have made good use of this notion, following Levi-Strauss and others. Obviously, however, much more data will be needed than my (1985b) study of the architecture of one village at Be'er Resisim.

18. On the proposed chronological sequence of my 'families' see Dever (1971, 1980: 40–5); but note (1974: 46) that from the beginning I have allowed for the possibility that these regional assemblages were more geographical than chronological, that perhaps they all not only overlapped but were largely contemporary. Recent critics like Richard and Long (nd) and Palumbo (1991) have overlooked this point.

19. For the new 'Family AZ', see Palumbo and Peterman (1993). I am not fully convinced, however, that this 'family', which overlaps considerably with my Family TR, deserves a separate designation.

20. See Thompson (1975, 1979); but cf. the sharp critiques in Dever (1980: 56); Prag (1984); Palumbo (1991: 18).

21. Excavated EB IV sites with sufficient evidence to characterize them as 'permanently settled agricultural villages' are so few that they may be enumerated: Beth-yerah; Sha'ar ha-Golan; Tel Yosef (Murhan); Manahat; Tel Abu en-Ni'aj; Tell Umm Hammad esh-Sharqiya; Iktanu; Jericho; Kh. Iskander; Bâb edh-Dhrâ'; Wâdi ed-Daliyeh; Dhahr Mirzbâneh; 'Ein Yael/'Emeq Refaim; Ephrat; Ma'abaroti; Lachish; Tell Beit Mirsim. The above constitute less than 2 percent of the 1200 known EB IV sites. Obviously we do not include in this total EB IV sites that are known through survey, since sherd scatters may indicate only seasonal occupation, not a true 'settlement'. The most recent synthesis of Gophna (1992) places too much stress, in my opinion, on the relatively few true settlement sites; but even he admits that most of the villages to which he alludes were 'transient settlements' (Gophna 1992: 137).

22. In a recent review of Esse's book (Dever 1994) I have documented how comprehensive and balanced his treatment is.

23. Palumbo (1991: 58–61), followed by Richard and Long (nd), claims that several other EB IV sites in Jordan exhibit city walls; but since these are known only from surface survey and have not been excavated at all, the question must be left open. What is beyond debate is that no EB IV site in Western Palestine has a city wall. Har Yeruham and Jebel Qa'aqir have flimsy boundary walls, but these cannot possibly have served defensive purposes.

24. The bibliography on settlement sites discovered since my (1980) survey is too extensive to cite; but full references will be found in Dever (1992b); Cohen (1986); Finkelstein (1991); and especially Palumbo (1991). Cf. n. 21 above.

25. My Co-director at Be'er Resisim, Rudolph Cohen, has since then investigated many other, almost identical EB IV sites in the Negev, one at Nahal Nissana even larger than Be'er Resisim; see Cohen (1986).

26. For his own, perceptive critique of models, see Palumbo (1987: 43–4, 54–6).

27. On 'tribal' groupings and their overlap, see references in n. 11 above.

28. The model of 'ruralism', although not entirely satisfactory, is developed further in Dever (1992b).

29. For references to the significance of 'regionalism' in EB IV, see Amiran (1960); Dever (1971, 1973, 1980); Finkelstein (1991); Palumbo (1991: 129); Palumbo and Peterman (1993).

30. Recent literature on pastoral nomadism is much too vast to cite; but see, for instance, Dever (1977); Castillo (1987); Prag (1984, 1985); Levy (1983); Palumbo (1991); Finkelstein; Finkelstein and Perevolotsky (1990) and references therein to the wider literature.

31. For orientation to recent studies of settlement history, see the references in n. 17 above.

32. The newer 'collapse' model has been applied fruitfully several times to Mesopotamia (e.g., Yoffee in Yoffee and Cowgill (1988: 44–68); Adams (1988); but thus far not to Palestine except for the EB III–IV period and the Late Bronze/Iron I horizon (Dever 1989, 1992a).

18

THE DAWN OF INTERNATIONALISM – THE MIDDLE BRONZE AGE

David Ilan

The polemics of nomenclature and chronology: what was and what is the Middle Bronze Age?

Of all the periods examined in the present volume, this and the preceding period have been the greatest focus of nomenclatural polemic. It is not only a question of semantics; our terminology reflects our cultural paradigm, and our interpretations and explanations of the archaeological record.

Since it was first recognized as a chrono-cultural entity by Albright (1932, 1933), the Middle Bronze Age's urban character has always been cited as its hallmark (e.g., Dever 1987; Mazar 1990: 174). This new urbanism was observed with such vivid innovations as wheel-made pottery, bronze tools and weapons, scarab seals, epigraphic evidence, massive earthen rampart fortifications, triple-entry gateways, monumental architecture, intramural burial, international trade, settlement heirarchy, and greater political and social integration and ranking (see the material culture table in Figure 2). Thus, when an excavated MB stratum is juxtaposed with a previous Intermediate Bronze Age stratum the differences appear striking.

Until a decade or so ago, this stark stratigraphic contrast led most archaeologists to posit a periodization that assumed more or less rapid cultural changes wrought by exogenous forces – most often in the form of immigrating populations, the Amorites – where each chronological phase was ushered in by a new Amorite group (e.g., Albright 1933; Kenyon 1966; Mazar 1968; Dever 1976). This paradigmatic reconstruction of culture change, though credible in some respects, is now considered by many to be a simplistic misinterpretation of the archaeological evidence, (e.g. Gerstenblith 1983: 123–6; Marfoe 1979; Tubb 1983; Ilan in press a). The forces of culture change in Canaan in the Middle Bronze Age were, as they almost always are, a complex combination of exogenous and endogenous factors, with different inputs asserting themselves to varying extents at different times and in different parts of the land. (The geographical term 'Canaan' is adopted here because it has a generic inclusive meaning and predates more politically sensitive terms such as 'Palestine', 'Israel' and 'the Holy Land'. Furthermore, religious texts from Ebla now indicate that some form of the name existed by the third millennium BC [Matthiae 1981: 187].) Certainly, individuals and groups of people with foreign origins can be detected in the archaeological record using defined criteria (see below), while certain other developments – political integration and the evolution of fortifications for example – can be attributed to more local factors such as peer-polity interaction (see Window, p. 316).

The Middle Bronze Age for the most part evinces cultural processes more evolutionary than revolutionary, and pivotal historical events are not easily discerned in the archaeological record. Thus, subdivision of the Middle Bronze Age is less a question of substance than one of convenience and, with this in mind, the straightforward tripartite nomenclature suggested by Gerstenblith (1983: 2–3) and Dever (1987: 149–50, with a summary of terminological alternatives) seems utilitarian, if somewhat artificial:

MB I (circa 2000–1800 BC)
MB II (circa 1800–1650 BC)
MB III (circa 1650–1500 BC).

All the same, our discipline is plagued by a confusion and overlapping of cultural and chronological terms. The Middle Bronze Age is a period, not a culture. Material culture features of the kind mentioned above can be singled out to distinguish its peak from the peak of the preceding Intermediate Bronze Age (IB), (so termed because it represents a significant socio-economic, and perhaps cultural, break with what preceded and what followed), but these features appeared in a non-coincidental fashion, a phenomenon schematically expressed by Figure 3 (and see below).

Does the evidence justify the notion of at least marginal contemporaneity of material culture types that characterize the Intermediate Bronze Age and the Middle Bronze Age? The Peer Polity Interaction (PPI) model adopted here suggests that processes of emulation create cultural homologies at a rate faster than can usually be detected in the archaeological record (Renfrew 1986: 7–8).

The mudbrick gate of Tel Dan (photograph: © A. Biran)

Figure 1 Map showing key MB settlement sites in Canaan

However, the PPI model operates on a regional level and leaves room for a flexible frontier; the interactions occurring outside that region, beyond the frontier, can be of another kind. The lowlands and highlands of Canaan show such a dichotomy, though both exhibit their own internal version of PPI concurrent with the contact that undoubtedly existed between them.

The above discussion brings to fore what should be a fundamental goal for the processual study of the Middle Bronze Age: the construction of a spatially sensitive absolute chronology on the basis of radiocarbon dates. It is considered axiomatic that, given the problems of standard deviation and calibration, radiocarbon dates are superfluous for Near Eastern contexts after ca 2000 BC, since relative chronology tied into Egyptian historical data can provide closer and more reliable dating. However, while largely true for the southern coastal plain of the later MB (to which time a number of Second Intermediate royal

name scarabs can be ascribed, [Weinstein 1981: 8–10]), this perception can no longer be taken for granted when:

1. the infrequency and *terminus post* nature of Egyptian or Egyptianizing finds (scarabs for example) is taken into account;
2. so many (five) alternative chronological schemes are current (Weinstein 1991: 110);
3. so many cultural facets appear to be regional and differentiated in scope (e.g., Kempinski 1983: 181–96; Ilan 1991).

Until a wide array of radiocarbon dates becomes available from successive MB stata at sites distributed over the various regions of Canaan, our thinking must display both vertical and horizontal dimensions when constructing our models of culture change. As we shall see, late Intermediate Bronze (IB) (Early Bronze IV, see Dever this volume, Chapter 17) assemblages, of the frontier regions in

Figure 2 Material culture table

Figure 3 Schematic representation of sociocultural change from the EB to the MB (based on E. Marcus [pers. comm.] and Marfoe 1979)

These gates embody a new architectural technique maladapted to a wetter environment and quickly abandoned. Better alternative materials – lumber and stone – were readily available.

2. New mortuary practices, having precedence in neighboring areas, appearing as a supplement, not a replacement, to those traditionally in use (see below).

3. Osteological evidence showing morphometric differences beyond expected anatomical variability within one particular population (Arensberg 1973; Smith, this volume).

4. Locally made 'Monochrome Painted Cream Ware' pottery derived from a style, technique and technology with precedence in northen Syria (Ilan and Yellin, forthcoming). Its distribution is highly localized in the Tel Dan region, with just a few pieces found further south in the Jordan Valley.

Whether or not the postulated newcomers from the north can be called 'Amorites' or not is another question (on the Amorite thesis see Dever 1977 and references therein); it is notoriously difficult to correlate material culture with ethnicity, even in modern day cultures (Renfrew and Bahn 1991: 167–9, 407–9; Hodder 1982; Kramer 1977; and specifically regarding the Amorites, Gerstenblith 1983: 124). The term 'Amorite' itself was a sort of nebulous, catch-all designation that included people of different classes and from different regions, in fact probably more than one ethnic group (Kamp and Yoffee 1980). While it may not be wrong to call the group(s) that immigrated into Canaan 'Amorites', it probably does not mean much either. In any event, from personal names registered in the few texts found locally, it seems clear that the Hurrians, was at least one other major ethnic group, also present in Canaan, at least by the middle of the MB (Anbar and Na'aman 1986-1987: 10–11).

Other facets of MB material culture that show precedence in Syria and Mesopotamia indicate, at the very least, a transfer of information, if not people: e.g., lowland settlements surrounded by earthen embankments (Gophna 1984: 30–31), triple-entry gates, casemate walls (Kaplan 1971). The

most visible artifact type – pottery – reflects an even more complex picture. Alongside the locally developed types, various other ceramic forms are present that have been accorded origins in either inland Syria or the Levantine littoral (Beck 1985). Such forms include types and techniques that show a clear EB pedigree, inferring that EB 'ceramic ideas' were retained in Syria and reintroduced into Canaan in the MB I. The underlying question is, once again, by what mechanism? The indications of population movement, together with the evidence for wide-ranging trade connections, PPI, and specialist center production, (discussed below) should lead us to the conclusion that the emulation and distribution of pottery styles, craft traditions and architectural techniques can be linked to all of these; in other words, both endogenous and exogenous factors were at work (cf. Cherry and Renfrew 1986: 152). The key to elucidating the operative patterns of exchange lies in using techniques such as neutron provenience analysis (NAA) and petrography (e.g., Knapp 1989; Ilan and Yellin forthcoming). When a sufficient number of studies are made over a large, contiguous region, explicit patterns of interaction will emerge.

Intensification and integration: what settlement patterns tell us

The lowlands

The changing settlement patterns of the Middle Bronze Age largely brought on by endemic reflect socio-political change largely brought on by endemic forces. The earliest occurrence of MB I material culture is to be found in the lowlands (see Figure 1) – the coastal plain, and the Jezreel and Upper Jordan Valleys – apparently to be found in the lowlands (see Figure 1) – the from a non-urban but at least semi-sedentary context. Lowland sites of the early MB I, such as Ashkelon, Aphek, Tel Ifshar, Tel Nami, Tel Mevorakh, Akko, Kabri and Tel Dan, are typically founded at or near karstic springs, or in areas rich in fertile soil places with high groundwater, in areas rich in fertile soil for dry farming or localized, small-scale irrigation.

Why did settlement intensify from the IB to the

particular, are actually contemporary with those of the early MB.

Amorites and Canaanites: the question of cultural origins

In the previous section it was suggested that Middle Bronze Age culture formation was the product of both exogenous and endogenous inputs (see Figure 4). The real job is to attribute cultural features to their sources and to identify the mechanism by which these features arrived and developed.

As noted above, until the late 1970s archaeologists working in the Holy Land utilized the incursionary model with little introspection. Ever since Childean diffusionism went out of fashion with Renfrew's (e.g., 1973) refutation of its chronological underpinnings, it has become

unpopular to suggest the movement of peoples as a mechanism of culture change, and most recent research is endogenously oriented in this respect (e.g., Bunimovitz 1989; Gerstenblith 1983; Marfoe 1979; Tubb 1983). But the pendulum may have swung too far towards the opposite extreme; the real issue is our ability to discern population movements in the archaeological record using explicit criteria and stated assumptions.

Several criteria, when considered together, may provide grounds for positing immigration into Canaan from or via Syria in the Middle Bronze Age; each phenomenon is observable in the latter region prior to its appearance in Canaan (Ilan in press a):

1. The construction, rapid deterioration and intentional blocking up of MB I mudbrick arched gate at Tel Dan (opening photograph, this chapter), Acco and Ashkelon.
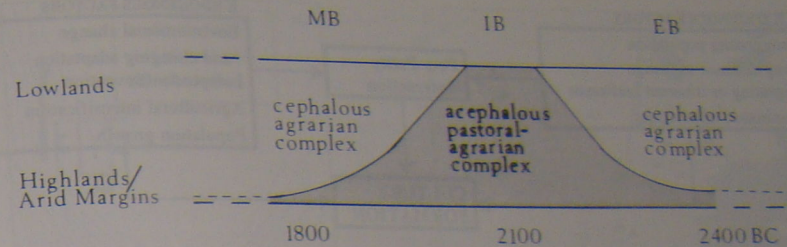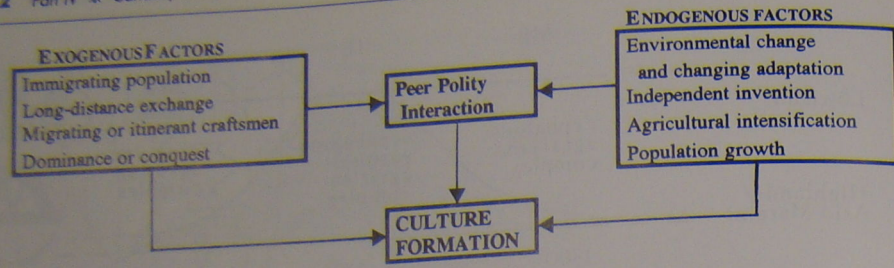
EXOGENOUS FACTORS

Immigrating population
Long-distance exchange
Migrating or itinerant craftsmen
Dominance or conquest

ENDOGENOUS FACTORS

Environmental change
and changing adaptation
Independent invention
Agricultural intensification
Population growth

Peer Polity Interaction

CULTURE FORMATION

Figure 4   Some potentail inputs for Middle Bronze Age culture formation (based on Renfrew 1986)

developed MB? Marfoe's modified version of the 'frontier model', (recently utilized effectively for succeeding periods by Finkelstein (1988a) and Bunimovitz (1989), suggests 'that the periodic oscillations between phases of political growth and interludes of decline were symptoms of a process wherein the rural hinterlands of the city formed a 'reservoir' that was alternately realigned into rural communities of sedentary farmers and tribal segments of pastoral nomads' (Marfoe 1979: 9). The spring-studded lowlands are inherently preferable for dry farming and once the marginal return on cultivation and sedentary occupation of the lowlands was perceived as greater than that of the highlands, the realignment into rural/urban society began anew. Because the ineffective but resource-draining political structures of the EB were gone, there was, initially at least, little risk in the re-establishment of permanent settlement, particularly where the establishing polity laid territorial claim on the prospective plot. Almost all the earliest MB I settlements show either low-intensity IB remains or IB occupation nearby (Gophna and Portugali 1988: Figures 6–7). Other factors leading to increased sedentarization may have included exchange ties evolving out of developing overland (Gerstenblith 1983: 109–26) and maritime (Gophna 1984: 31; Marcus 1991) trade, perhaps hinted at in the Sinuhe account (e.g., Rainey 1972).

Extensive survey of the coastal plain south of Mt. Carmel (Figure 5) has revealed a number of fortified urban sites more than one hectare in size related hierarchically to smaller satellites (by a ratio of 1:3.3 for both MB I and II/III; Broshi and Gophna 1986; Gophna and Beck 1981; Gophna and Portugali 1988). Table 1 is a rank-size breakdown for the MB I and II/III respectively.

Besides testifying to central place function and hierarchical organization for both the MB I and II/III time frames, these data disclose an intricate temporal dynamic as well, evoked by the fact that only 27 out of 100 counted sites were settled in both MB I and MB II/III. The tendency to urban agglomeration from MB I to MB II/III is expressed by the lower ratio of small to large sites in the later period and by the discernment of 22 MB I sites not settled in the MB II/III. At least three major fortified

settlements were abandoned by the end of the MB I: Tel Burga, Tel Zeror, and Tel Poleg (Gophna and Portugali 1988: 17–18, 26). An increased elaboration of site ranking may be asserted in the higher proportion of mid-size settlements of between 1.1 and 4.9 ha. in the MB II/III. Such tiered settlement patterns and administrative structures have been recommended as hallmarks of the early state (e.g. Johnson 1972; Wright and Johnson 1975).

In the MB II/III 44 new settlements were established, including major fortified sites at Tels Ashdod, Nagila, Haror, Jaffa, Jemma, Mihal, Mor, Nebi Rubin, Kh. el Rujum, Farah (S.), and Sharia. All but one of these fortified sites were located south of the Yarkon River drainage, on the southern coastal plain. Gophna and Portugali (1988) have inferred that a Malthusian mechanism was at work; population rose faster than agricultural production, neccesitating the cultivation and settlement of new regions. Though not the only possible explanation for settlement expansion, this interesting idea will undoubtedly be tested and elaborated in future research.

Raban (e.g., 1985) and Marcus (1991) have observed that the coastal plain site array is oriented along the various drainages, where estuary sites provide foreland access and gateway services, and large inland sites function more as central places with hinterland access. The two complementary settlement types, and the smaller sites in between, are conceived as belonging to one polity or economic system. The concept of drainage-defined polities and an emphasis on latitudinal as opposed to longitudinal movement points up the importance of maritime interaction in culture formation and change. It is no accident that similar drainage-aligned settlement patterns have been detected by Levy (Chapter 14, this volume) in southern Canaan for the Chalcolithic (though maritime trade was less important), and by Stager (1992) for the EB.

The rank-size data, rapid urbanization, population growth, evidence for economic intensification and the large number of Hyksos royal name scarabs have suggested to some writers the administrative integrity of a united polity in the coastal plain (e.g., Bunimovitz 1989: 47–74). Maritime polities, however, can be highly integrated economically but tend to be small and jealous of their

independence (e.g., Snodgrass 1986). As noted above, a certain degree of political consolidation and realignment did occur, but this does not imply the unification of the entire littoral. The premise of administrative unity would require – in light of the royal name scarabs – that the political center be Avaris (Tell el-Dab'a in the Nile Delta), which seems a more maximalist notion than the evidence warrants.

While the above discussion on the lowland settlement pattern has dealt mostly with the coastal plain south of the Carmel range, many aspects should be applicable to other lowland regions: the explanation for the initial settlement impulses, the development of rank-size distribution, the expansion into previously unsettled or sparsely settled areas, and the importance of trade whether overland or maritime (cf. Gerstenblith 1983: 21, 125). One particular lowlands anomaly is significant; the average site area in the northern coastal plain and the Hula Valley is several times that of other lowland and highland sites (see Table 2). This is due in part to the burying of smaller sites by colluvial and alluvial deposition (cf. Gal 1991 on precisely this phenomenon in the Jezreel Valley); and less intensive surveying may also be prejudicing the results. But these caveats cannot explain all of the differences. We might conjecture that this tendency toward very large sites is a
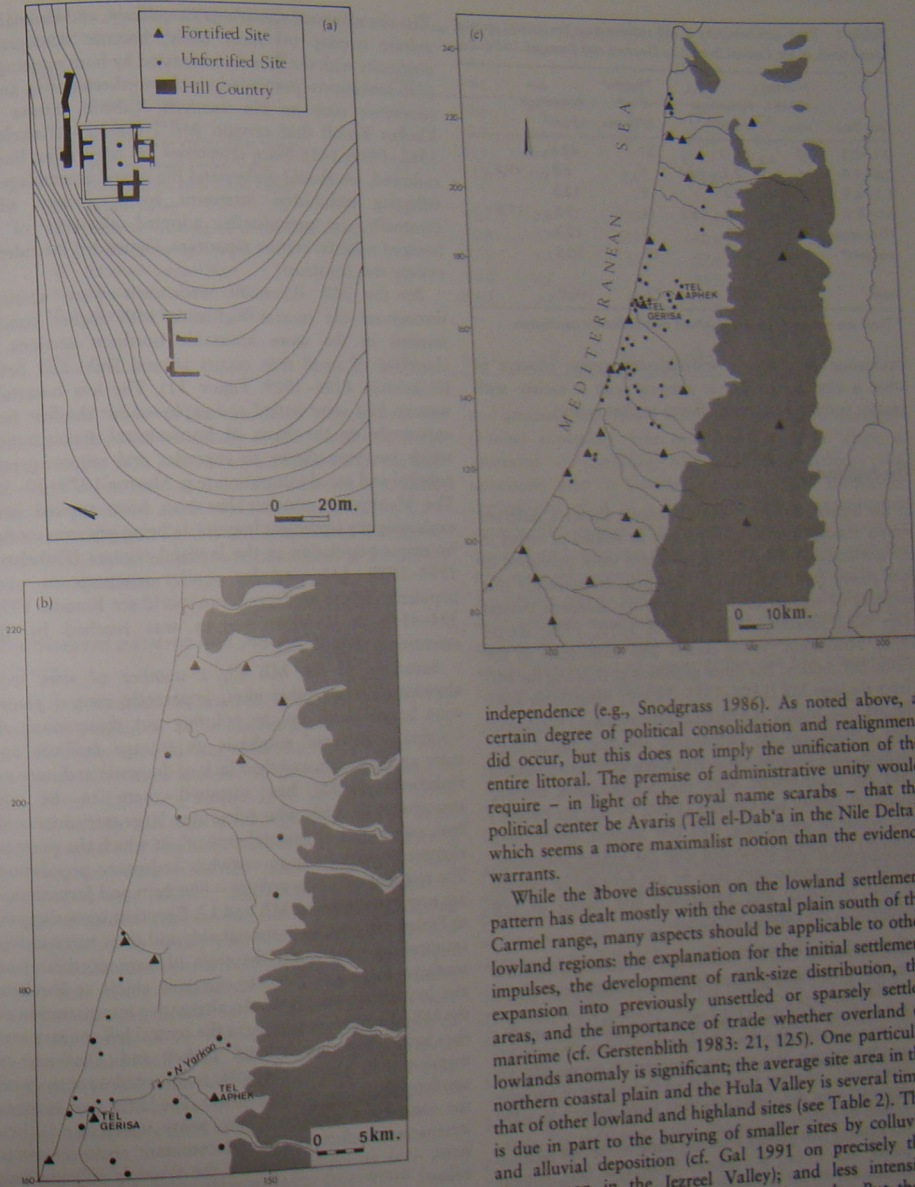
Figure 5   (a) The MB palaces at Tel Aphek, (b) MB settlements along the Yarkon River drainage, and (c) MB settlement in Canaan's southern coastal plain. Adapted from: Beck 1985: Figure 1; Gophna and Ayalon 1980: Figure 14, Gophna and Beck 1981: Figure 1

Table 1 Rank-size hierarchy of MB settlements in the coastal plain of Israel, south of Mt. Carmel (based on Gophna and Portugali 1988: 26)

Size (ha.)	Number of MB I sites	Percentage of total		Number of MB II/III sites	Percentage of total	
0.1–0.3	33	59.0		31	42.6	
0.4–1.0	4	7.1	66.1	5	6.8	49.4
1.1–4.9	4	7.1		9	12.3	
5.0–9.9	1	1.8	8.9	4	5.5	17.8
10 or more	8	14.3		9	12.3	
unknown*	6	10.7		15	20.5	
Total	56	100.0		73	100.0	

* These are necropoli, generally without clear settlement association.

expression of a more Syrian/Mesopotamian concept of what a city should be, in keeping with a society with greater contact and more affinity to that region.

The highlands

In the highlands the settlement process shows a different tempo, though it must in some way be related to events in the lowlands. The most comprehensive work published to date comes from the central highlands, conveniently (for purposes of comparison) tangent to the southern coastal plain (e.g., Finkelstein 1988–1989; 1992; 1993; Zertal 1992). Finkelstein (1993) counts 248 settlements in the central hill country, but notes problems in isolating the MB I from the later MB (1988–1989: 140–1). Identifiable MB I sites are rare, mostly confined to intermontane valleys, and when datable can be assigned to the late MB I (e.g., Shechem, Tell el-Farah (N.), Jerusalem and Bethel; dating based on comparisons with the coastal plain ceramic repertoire). Broshi and Gophna (1986: 79–82) list 10 MB I sites, many of which (e.g. Tell Beit Mirsim, Gezer, Beth Shemesh) are better associated with the Judean Shephelah. One of four explanations may be put forward to explain the low frequency and apparently late dating of MB I settlement in the central highlands:

1. the central hill country was almost completely abandoned in the early MB, perhaps with the resettlement of the lowlands;
2. the settlement regime of the IB experienced a crisis similar to that postulated by Finkelstein (this volume, Chapter 21) and Bunimovitz (this volume, Chapter 19) for the MB–LB transition – one that resulted in an earlier case of 'invisible nomads' who did, however, leave some pottery in a few reused IB tombs;
3. the existing MB pottery – usually dated to the MB II/III – is partly MB I, i.e., a regional facies that later impacts stylistically on the lowlands and continues in the highlands;
4. the material culture associated with the IB continues into the MB I, and is replaced at the same time that mass sedenterization ensues.

The abandonment scenario (1) is unlikely, and the material culture overlap (4) most likely, because demographic continuity with the IB is demonstrated by both ongoing use of IB settlements (particularly in the northern parts), and IB cemeteries such as Ein Samiyeh, Gibeon, Efrata and Khirbet Kirmil that contain MB I material (Finkelstein 1988–1989: 141). Since cemeteries are most often lineage endowed, we should understand the mixed assemblages as reflecting continuous interment by a society which eventually, or periodically, adopted elements of the lowland material culture repertoire. Figure 3 is intended to convey this construct.

By the MB II, small settlements were scattered throughout the central highlands with higher concentrations in the more amenable northern sections. A clustering of small sites occurs around Shilo and Bethel (Finkelstein 1988–1989: Figure 11). The less hospitable western hills were settled and exploited for the first time, apparently on the basis of horticultural specialization, which has been shown to engender and require greater political and social integration (e.g. Marfoe 1979: 20–30). The Malthusian principle has also been applied here, explaining the settlement impulse as being put into motion by excess population in the lowland regions (Finkelstein 1988–1989: 141; and for similar reactions to overpopulation in the Mediterannean world see Braudel 1972: 394–415). A settlement zenith was reached by the seventeenth century BC.

Sometime in the MB III, a number of sites were abandoned, while other sites, apparently central places, were heavily built up. In pointing out these massively fortified settlements' emphasis on storage facilities and cultic appurtenents, and their lack of domestic architecture, Finkelstein (1993) has surmised them to be 'the strongholds of chiefs who ruled over large territories with both sedentary and pastoral groups', in which the pastoral element derived from an erstwhile sedentary population. The fact that only two polities – Shechem and Jerusalem – are ever mentioned by MB and LB Egyptian texts suggests to Finkelstein that these strongholds and their surrounding countrysides were under the aegis of large northern and southern dominions ruled by supreme chiefs at Shechem and Jerusalem respectively. An alternative interpretation of the MB III settlement pattern in the central hill country sees the local clustering around Bethel and Shechem as manifesting a more politically fragmented system with smaller polities (Bunimovitz 1989). The latter view invokes the competitive aspect of peer polity interaction – i.e., internecine conflict and its concomitant socio-economic stress – as an explanation for the system's collapse (see below).

Other highland regions are less well understood, though recent surveys of the Galilee show similar patterns and a comparable tempo at a much lower intensity (Gal 1988; and see Broshi and Gophna 1986: Tables 1–2). In the

Table 2 Summary of known Middle Bronze Age sites in Israel (after Broshi and Gophna 1986: 86)

Region		MB I			MB II/III		
		Sites	Area	Ave	Sites	Area	Ave
1	Upper Galilee	7	19.6	2.8	7	19.6	2.8
2	Lower Galilee	4	2.2	0.6	57	34.2	0.6
3	Upper Jordan Valley (Hula Valley)	7	101.1	4.4	7	101.1	14.4
4	Mid and Lower Jordan Valley (including the Beth Shean Valley)	16	13.9	0.9	34	15.8	0.5
5	Jezreel Valley	28	81.2	2.9	20	17.6	0.9
6	Samaria (including the Gilboa and Carmel)	4	10.8	2.7	105	82.6	0.8
7	Judea (including foothills)	9	31.8	3.5	33	82.6	2.5
8	Northern Coastal Plain	6	88.0	14.7	7	93.0	13.3
9	Coastal Plain (south of Carmel)	49	206.5	4.2	65	210.3	3.2
10	Arad and Beersheva Valley	—	—	—	2	3.5	1.8
	Total	130	555.1	4.3	337	660.3	2.0

inland foothill zone of the northern Negev, only the Beersheva Valley was irregularly settled – and only in the later part of the MB, perhaps in connection with the east-west trade route that crossed the area (cf. Finkelstein 1988b). In the desert south of the Beersheva Valley, a few small sites yielding no datable artifacts, located in relatively amenable ecological niches, have been dated to the MB by means of radiocarbon (Avner et al. in press).

MB settlement patterns and populations: a summary

Table 2 is a summary of the MB settlement picture. The averages calculated in Table 2 should now be diminished and will require even further reduction in the future since most newly discovered sites are of the lowest rank size. In 1987, Dever (following Kotter 1986 and Mabry 1986) cited 400 known MB sites in the region covered by Table 2, while Broshi and Gophna's summary brings us closer to 500. The new data from the central highlands alone indicates 248 sites (above), suggesting a total number of MB sites at somewhere between 500 and 600. Calculating total population by multiplying total estimated settlement area by the accepted density coefficient of 250 persons per hectare, and taking undiscovered and non-representative areas into account, Broshi and Gophna (1986: 86) have arrived at figures of ca 100,000 for the MB I and ca 140,000 for the MB II/III. Using less explicit criteria, the later Kempinski (1992c) estimates higher figures for the later floruit: ca 120,000 in the urban centers and ca 80,000 in the rural areas, for a total of ca 200,000.

The dawn of internationalism: patterns of production, exchange and power

Middle Bronze Age Canaan evinces a picture of a society growing in population, intensifying agricultural and craft production, participating in far-flung exchange systems, and attaining over time a multi-tiered settlement hierarchy (below) expanding into new frontiers – in short, a portrayal of increasing socio-political complexity not previously seen in Canaan. Gateways were themselves centers and often of a higher order than non-gateway centers. This system was the result of a long process of political and economic rationalization that began with the first wave of sedentarism in the early MB. Villages and farmsteads always provided the bedrock for higher level socio-political structures, and it was from these that the centers emerged, elaborated and specialized over time. The spatial distribution of power in the mid MB I may have looked something like this:

1. Regional centers and gateways (on gateways and their definition, see Knapp 1989: 145, and references in n. 5?
2. Subregional centers and/or loci of specialist production or service (e.g., cult).
3. Village.
4. Farmstead.

Based on geographical location, rank-size distribution and evidence for exchange and production (Kotter 19?? and Knapp 1989), the spatial distribution of power in the MB II/III can be described at the peak of complexity is usually attempted (see Figure ?) with more detail than is usually attempted (see Figure ?)

1. First order gateway (primarily Hazor and Tell el-Dab'a?).
2. Second order gateway (e.g., Ashkelon, Kabri, Pella).
3. Third order gateway (e.g., Masos, Dan, Jericho, ? Jaffa).
4. Regional center (e.g., Megiddo, Beth Shean, Shim?? Shechem, Gezer).
5. Subregional center and/or locus of specialist produc?? (e.g., Tell el-Hayyat, Afula, Tel Kittan).
6. Village.
7. Farmstead or hamlet.

It is considered a truism that the largest order se?? ments are the most complex, dominating their surroun?? countryside (e.g., Kotter 1986 and Knapp 1993 for ?
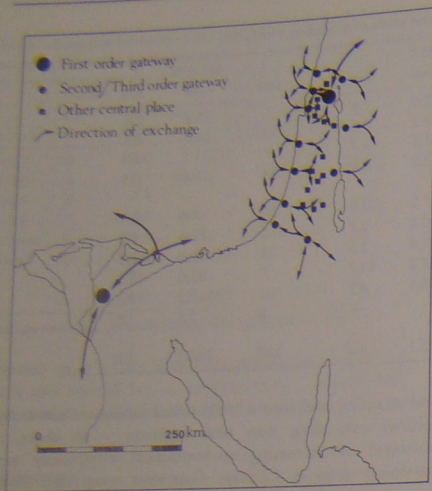
Figure 6 Map of MB central places, gateways and patterns of exchange in the eastern Mediterranean

Canaan). Marfoe's (1979) model of Bronze Age society in southern Syria in its more complex stages seems at least partly applicable for Canaan during most of the Middle Bronze Age – a polarized structure in which the social center (the elite) is focused on the palace-temple institution with a subordinate peasantry on the social periphery. Given the small size of all but the first and second tier gateways, and drawing on analogy provided by the El Amarna texts for the LB system, this elite should be seen as kin-based and as maintaining multiple roles – administrators, military commanders, traders, priests and the like. The gateway communities, however, may have been organized on somewhat different principles, with more scope for private enterprise, merchant guilds, commodity manipulation and capital lending along the lines of the Old Assyrian or Old Babylonian states (e.g., Stohl 1982). The textual evidence from Mesopotamia and Syria reveals that artisans, for example, were affiliated with controlling institutions in the urban centers, and were not freelance itinerants. Moreover, metal specialists seem to have been in short supply in the periphery during the first half of the second millennium BC (e.g., Zaccagnini 1983).

Nevertheless, certain evidence points to a more segmented system of procurement and production, and more local autonomy. The excavations at Tell el-Hayyat – located in the central Jordan Valley (Plate 1), Transjordan near the large tel of Pella – and the sanctuary at Nahariyah (Plate 2a,b), have revealed remains of both metal and ceramic industries active from the MB I through the MB III (Falconer 1987; Falconer and Magness-Gardiner 1989;

Dothan 1965). In both cases metallurgy is associated with cult structures. Tell el-Hayyat is not a higher order site where one would expect a center of production related to a scarce and costly resource. The Nahariyah sanctuary, though probably associated with a nearby urban entity, is also isolated.

The common-ware ceramic production of Tell el-Hayyat is somewhat less surprising; pottery making is/was often a less prestigious specialty associated with lower echelon social units (the family) located at the social and spatial periphery (references in Knapp 1989: 137). But in a ranked, redistributive settlement system, production tends to be rationalized over time, with the output of certain units, even lower echelon ones, achieving market dominance. Maximum efficiency is attained when that ceramic product is brought to the redistributive urban node or market – Pella in the case of Tell el-Hayyat (cf. Falconer 1987; Knapp 1989: 137, 141). The intensive production and far-flung distribution of the distinctive black punctated Tell el-Yahudiyeh Ware juglets (with a manufacturing center in Afula) is a prime example of how complex this initially localized phenomenon could become (Kaplan 1980; Zevulun 1990). It is conceivable that atelier success in the production and marketing of special pottery (or other artifact) types brought such wealth and prestige to the polity that the lower echelon's status was upgraded – by the receipt of gifts and honors to its elite, and greater economic autonomy.

The conclusion to be drawn is that the rural hinterland was more autonomous and more complex in itself than most models have recognized (cf. Falconer and Magness-Gardiner 1989; Renger 1984). The production of lower rank-size class settlements was not neccesarily confined to the domestic/subsistence mode, and a fairly high degree of agricultural surplus administration and redistributive control must be inferred. Furthermore, unlike Mesopotamia, craft specialization was not neccesarily confined to sites of the largest order. Even prestige items were both produced and consumed at the level of at least middle-tier settlements (e.g., weapons and luxury ware pottery).

Nevertheless, more expensive and elaborate goods – metal (especially tin) in particular – were acquired through the longer-range exchange ties of the larger centers (Philip 1989: 206–7). This must have been a preeminent source of power. That the largest centers had a large degree of control over the human resources of their hinterland seems clear in the quantity of labor exploited to construct their ramparts (see Window 1, p. 316).

Northern trade and the role of Hazor

Trade with Syria and regions beyond is vigorously attested to by both texts and, more obliquely, by material culture. The pertinent texts (found at Mari, on the Euphrates River, which naturally plays a central role in them), refer to

Plate 1 Tell el-Hayyat, MBI temple (courtesy of Bonnie Magness-Gardiner, photograph by J. Kline)

Hazor and Laish (Tel Dan). Tin was an important focus of commercial connections (e.g. Dossin 1970), though most of the communications allude to the movements of messengers and the role of ambassadors, without mention of commodities (e.g. Malamat 1960, 1970). Hazor is often indicated together with other kingdoms: Babylon, Eshnuna, Ekallatum, Karana, Qatna, Yamhad, Carcemish, Emar, Ugarit and Kaptara (Crete, Cyprus?). Long-term emissaries from Babylon were resident at Hazor and, in a letter from Shamshi Adad, King of Assyria, to his son Iasmah Adad, ruler of Mari, envoys from Hazor were accorded great status and appointed a special escort from Qatna. If the present excavations at Hazor should reveal an MB archive, references to a foreign traders' colony, like that at Kultepe, will not be unexpected. Material culture connections alone (pottery styles, 'International styles' of weaponry, tin, and others mentioned in the second section), point emphatically to Hazor's role as Canaan's northern gateway in a truly international system of exchange (cf. Gerstenblith 1983: 7–16).

The decline of the Assyrian trade network in the late eighteenth century BC seems to have been brought on by the consolidation of the Old Hittite state and the protectionist economic policies of Babylon (e.g., Yoffee 1981: 12, 24). While trade certainly persevered, peripheral locations such as Canaan must have felt the repercussions of the Assyrian system's demise, especially in the availability of tin and perhaps other metals. There are several indications of this.

1. The metal-containing offering deposits characteristic of the MB I (below) seem to have been curtailed in the MB II/III.
2. It seems that the relative quantity of metal in burial assemblages also diminished from the MB I to the MB II/III. At Tel Dan for example, all the weapons come from MB I or early MB II deposits while the MB II/III interments contain only stick pins (Ilan in press a).

3. A statistical analysis of MB bronzes reveals that tin content shows a constant decline after the MB I; in other words, tin was either less available or not at all, and tin bronzes were being recycled with more locally accessible copper, the result being an increasingly dilute product over time (S. Shalev personal communication).

From the late MB I at the latest, Hazor was the primary state in Canaan. In size (ca 80 ha.) and in complexity it dwarfs all other MB sites; the next largest sites in Canaan, Ashkelon (50 ha.) and Kabri (40 ha.), are roughly half its size. The nearest known sites of comparable scale lie far to the north at Qatna in Syria (though one in the Damascus basin is likely), and far to the south at Tell el-Dab'a in the Egyptian Delta. It is perhaps the only Canaanite site with a true 'acropolis' containing what appears to be a palatial structure (Yadin 1972: 124). A number of temples (or 'chapels', to borrow a term used by Woolley [1976] for a similar array of cultic structures at Ur) apparently dedicated to a variety of deities, together with examples of elite architecture, in both the upper and lower cities, indicate that this is a first order settlement site that clearly belongs to the Syrian/Mesopotamian tradition of central place urbanism (e.g., Johnson 1972). It is at a site of this order where the elite would exhibit true specialization and hierarchy, the roles of merchants, priests, administrators, scribes and the professional military would have taken on a guild-like organization with less merging of functions and more scope for private enterprise. Why did Hazor alone become such an enormous center? There are several possible explanations:

1. increased agricultural productivity, and the commeasurate surpluses, brought on by the adoption of irrigation in the Hula Valley. The dry farming potential of Hazor's catchment could in no way provide the surpluses required to explain its size (cf. Marfoe 1979: 5–12 for similar microenviroments in the Beka'a Valley of Lebanon). Greenberg (1991) ascribes the predomination of EB Tel Dan to hydraulic intensification in a similar scenario.
2. Hazor's role as a 'gateway' or emporium between north and south, east and west (cf. Knapp 1989).
3. a massive influx of new population, perhaps together with an organic command structure already in place (cf. Yadin 1972: 106). It is highly probable that more than one of these factors was operative.

Hazor demonstrates a progressively expanded area, a multiplicity of functions, increasing complexity and political ascendency. It can be suggested that by the MB III nearby Tel Dan had fallen into its orbit as part of an amplified early state module. It would also appear that, unlike the peer-polity relationship that existed between the central highlands and the southern coastal plain, Hazor maintained more control – more of a center-periphery relationship – over its surrounding highland hinterland (Finkelstein 1992: 208). Its territorial extent probably reached deep into the Galilee to the west, the Golan

Plate 2a Selected cultic offerings from the MB temple at Nahariya (photograph: The Israel Museum, Jerusalem)

Heights to the east, the Sea of Galilee to the south and the northern Hula Valley or beyond to the north.

Southern trade and Avaris

Turning south, the archaeological evidence for extensive contact with Egypt in the Twelfth Dynasty (if not earlier) is now unequivocal (Marcus 1991: 19–44; *contra* Weinstein 1975). Principally driven by trade, even the earliest relations were apparently bilateral, though by different routes; the southern Asiatics seem to have preferred, or been limited to, the overland route (as witnessed by the wall paintings in the tomb of Khnumhotep at Beni Hassan), while the northern Asiatics and the Egyptians, preferred the maritime route. Aside from Egyptian and Egyptianizing (i.e., Egyptian in style, not manufacture) artifacts (most recently and completely summarized by Marcus 1991), the settlement array of the coastal plain provides testimony for a maritime orientation as well. Commercial relations with Egypt probably began with small estuary ports provisioning ships plying the proliferate Byblos trade. One can envision central place, gateway exchange developing at these ports beyond mere provisioning, and by the Second Intermediate Period (MB III), trade with the Syrian coast had declined while that with the southern littoral was boosted. That maritime trade exchange was already highly developed and long distance in the MB I is made clear by the find at Tel Nami of *Lathyrus clumenum* (Spanish vetch), a lentil which does not grow east of Greece (Kislev et al. 1993).

Plate 2b Mould used to maufacture metal statuette on-site (photograph: The Israel Museum, Jerusalem)

Tell el-Dab'a was Hazor's functional and scalar counterpart in the south (from a southern Levantine point of view). Pottery traditions and provenience analyses, metal typology, physical anthropology and burial practices suggest that initially (in the MB I) its commercial focus was on the northern Levant – Byblos in particular. Its very establishment in the Twelfth Dynasty may perhaps be attributed to Asiatics who specialized in commerce and shipbuilding (e.g., Bietak 1991: 28–9). Metal types and pottery provenience analysis by NAA (M. Bietak, P. McGovern and L. Stager pers. comm.) indicate that by the MB II its energies were apparently transferred to the southern Levant for which it has been rightly termed the 'economic locomotive' (Philip 1989: 214). The reason for this transference in commercial focus is unclear, but it too may have been an outcome of the changing economic and political conditions in Anatolia, Syria and Mesopotamia.

These two first order gateways were nodes of a wonderfully symmetrical exchange system that also included smaller gateways tapping into other systems on frontiers to the west (the maritime zone), the south (the Negev, Sinai and Arabia), and the east (Transjordan and the Syrian desert), (Knapp 1989; and see Figure 6).

Architecture, waterworks and urban planning

Though exposure is insufficient to accurately characterize them, the earliest MB sedentary occupations apparently featured discrete domestic structures comprised of rooms of various shapes and sizes arranged with no standard formula around their courtyards (Ziffer 1990: *17–*18; Ben-Dov 1992). This pattern seems to have held throughout the MB and LB for rural architecture and is generally associated with a mixed agrarian/pastoral economy (e.g., Kramer 1982). In the developing towns, the extension of family households engendered organic growth – leading to domestic quarters that expanded both laterally, encroaching upon the remaining open spaces between domiciles, and vertically in the form of two or three story construction. At a particular level of density, structural units came to share walls to economize on space and expense. Without intervention, the culminating strategies of this process were the subdivision of larger rooms into smaller ones, and alternately, the offspring establishment of new domiciles on the settlement's periphery (see Azar et al. 1985 for ethnographic documentation). Since most towns were fortified, and those fortifications restricted settlement area over time, occupation sometimes spread to outside the fortifications (e.g., at Megiddo over the cemetery on the east slope, [Guy 1938: Plate 1]). Migration, of course, was another option, either to a major center with available property and a wider economic base such as Hazor, Ashkelon or Kabri, or to a new settlement such as those of the southern coastal plain.

Interceding central authorities could influence a different course of events. At Megiddo and Shechem, for example, we see the cancellation of domestic architecture and the superposition of well-planned elite structures, sometimes in successive versions over time (Kempinski 1992a). Furthermore, many older fortified sites show a general tendency toward an increased proportion of elite or public palace/temple architecture at the expense of domestic building from the MB I through the MB III. Another form of central authority intervention was the enclosure and fortification of an appending area designated for new settlement, clearly attested to only at Hazor. Finally, it seems that new, unattached settlements, even at some distance from their sources, were actually initiated by controlling political structures. The rectangular fortified town at Tell el-Ajjul (Figure 7) was presumably established in the late eighteenth century BC as a planned program (Kempinski 1992a: 125–6), skipping the organic early growth phases characteristic of the older towns, as evidenced by its relatively straight grid of unencumbered throughfares – almost Hippodamian in their symmetry. The rectangular shape of new and appended fortified settlements appears to be a hallmark of the MB II, e.g. Tell

el-Ajjul, Tel Batash, Yavne-Yam, Hazor, Tel Nagila and Tel Masos.

True palaces, elaborate variations of the domestic courtyard structure, appear for the first time in Canaan during this period, though their origins are clearly to be seen in the third millennium BC palaces of the north such as Eshnuna, Mari, Ebla, and Ur (Oren 1992). The earliest one recognized thus far appears to be that of Aphek (Kochavi 1989: 48–53), in the lowlands, where the processes of sedentarization, urbanization and social polarization were embryonic. Later examples are found at Aphek once again, Megiddo (Figure 8), Hazor, Shechem, Kabri, Lachish, Tell el-Ajjul and Tel Sera. Drawing on textual material from large urban centers with similar and more completely excavated palatial structures (Mari, Ebla, Ugarit, Alalakh), it seems clear that much of the palaces' roofed space was devoted to food processing, craft production, storage and administration, particularly on the ground floor (e.g., Dalley 1984: 50–77). All of this fits in with the idea that a significant portion of the economy was redistributive and organized by the palace-temple institution.

One further innovation of the Middle Bronze Age needs mentioning in this context: hydraulic engineering, which embraces three facets – storage, drainage and irrigation. While the Early Bronze Age saw the development of runoff catchment within settlements with an emphasis on open reservoir storage (Helms 1982), the MB progressed to true closed cisterns, to clay pipes that drew rainwater down from the roofs into the cisterns (e.g., Yadin 1972: 38, 43–4, 65, 127), and to sealed, stone-built and stone-carved channels to drain off excess water – most probably to exterior reservoirs, fosses or moats (e.g., at Tel Dan, Hazor, Tell el-Ajjul, Tell Beit Mirsim, Tell el Farah (N.) and Gezer, to name a few). These exterior reservoir facilities probably made possible some limited irrigation, though not to the extent allowed by perennial water sources and good gradients at places like the Hula Valley and the Yarkon Basin.

Palatial construction, and sophisticated drainage and storage facilities belong in a class together with fortifications and gate structures in terms of labor requirements, engineering criteria and centralized planning. All intimate the mastery of the social and political elite over human resources, commodities, technology and information.

Technological revolution and the arts

The Middle Bronze Age was also marked by technological and stylistic innovations in the manufacture of mobile objects (briefly, Dever 1987: 160–2; and for a more detailed and in-depth account of the MB artifactual repertoire, see Ziffer 1990). Not surprisingly, many of

Phon. Value	Schematic Forms	Early North-west Semitic	Early South Semitic	Early Letter Names	Meaning of Names
ʼ				ʼalp-	ox-head
b				bêt-	house
g				gaml-	throw-stick
?				digg-	fish
h				hô(?)	man calling
h				wô(waw)	mace
z				zê(n-)	?
ḥ				ḥê(t-)	fence (?)
?				ḥal( )	hank of yarn spindle (?)
?				têê(t-)	?
y				yad-	arm
k				kapp-	palm
l				lamd-	ox-goad
m				mêm-	water
n				naḥš-	snake
?				(šamk-?)	?
ʽ				ʽên-	eye
?				ga( )	?
p				piʼt-(?)	corner?
s/z				saḍ(-)	plant
?				?	?
q				quṗ(-)	?
r				naʼš-	head of man
?				tann-	composite bow
?				?	?
t				tô(tav)	owner's mark

Figure 9 The alphabet at the mid second millenium BCE. From Albright 1966b

...crucial techniques became prevalent, enhancing military ...ffectiveness and demanding creative responses in tactics, ...ortification and personal protection.

The adoption of tin bronze, partially in lieu of copper, ...creased the longevity, sharpness and hardness of ...eapons, while the increased malleability of bronze ...cilitated the casting of more complex forms. Horses ...avalry) and the chariot introduced rapidly movable ...ghting platforms that could be rushed to critical locations ...battle and used as shock forces against infantry. The ...ompound and composite bows, with their bolstered ...ower and range, made the bow a truly effective weapon in ...attle and seige for the first time. Battering rams were ...mproved and became effective seige engines (Yadin 1963: ...–9; 58–75).

Most of these weapon types and techniques require ...ighly specialized knowledge and a developed mechanism ...or resource procurement. Bronze, for example, required ...he import of tin, the nearest known possible sources ...being the Taurus Mountains of Anatolia (Yener and ...Özbal 1987), and beyond that, in Iran and Afghanistan ...e.g., Muhly and Wertime 1973). An expansive, ...organized exchange system with extensive channels of ...information must be postulated; texts, from Mari in ...particular, testify to the highly lucrative importing of tin ...from the east (Dossin 1970) and its transshipment to ...owns such as Laish (Tel Dan) and Hazor (Malamat

1970). It has been suggested that the manufacture and distribution of composite bows, being a complex process more effectively carried out on a mass-production basis, was the function of the palace workshop (Philip 1989: 158–61). The same might be said for chariots and other engines of war. Finally, the textual references make it clear that warfare was not unknown in the Middle Bronze Age Levant. These sources tend to emphasize 'logistics, seige techniques and equipment, patrols, blockades and so on'. (Philip 1989: 155; Yadin 1963: 69–75), all of which can be associated with social regimentation, central direction and control of productive technology.

The key to an archaeological analysis is apparently the distinction between actual warfare and personal combat (Philip 1989: 145–6). The overwhelming majority of weapons recovered in archaeological contexts come from tomb and cultic offering deposits. These are most commonly comprised of daggers, axes and spears in descending order of numerical importance, often in sets (daggers and axes are notably common, while spears are unusual and never alone). The complete absence of arrowheads or sling bolts is conspicuous, though these were known and had in fact become a major component of large-scale military confrontation. Arrows and bolts were the weapons of soldiers – low status individuals, often conscripted, who could be used for agricultural or construction work (Philip 1989: 150). But daggers, axes and spears were weapons of personal combat – they were the warrior's status symbols in what Philip has termed a traditional 'heroic' society, much as they have been in most traditional societies. Artistic depictions and texts even suggest a status hierarchy of weapon types, with axes at the top and spears at the bottom. Weapons were also a valuable gift, bestowing prestige upon both the recipient and the donor, and creating indebtedness for the recipient alone (Philip 1989: 160–1).

Stylistic change in personal weaponry should also be understood in terms of their prestige value and not always as the expression of improved functional effectiveness (Philip 1989: 155; *contra* Yadin 1963). Over time, as certain weapon styles became more and more common, their value went down. At some point, the elite-controlled centers of production would commission somewhat different forms, to reassert status distinctions and to realign alliances and indebtedness to the controlling structures.

With all the weaponry in MB assemblages, why are there so few MB destructions in layers which sometimes represent 400 years or more of occupation? Their cultic and mortuary nexus, their prominence in mythology, and the fact that so many weapons are still copper or contain too much lead, emphasize the ritualistic nature that combat may have assumed in certain contexts. Perhaps ritualistic rules of warfare precluded certain practices – the burning

of settlements, for example. Moreover, the large quantity of weapons in cultic deposits, such as those at Byblos, may be related to those cult places' functions as oracles and the loci of arbitration.

Religious beliefs and the politics of cult

Defining what is cultic in an archaeological context is notoriously difficult and should require the interpreter to state his or her assumptions and methods explicitly. Though explication of this sort has not been the rule, most researchers have intuitively followed criteria similar to those proposed by Renfrew (1985: 11–26; Alon and Levy 1989). Workers in our region are also influenced by contemporary textual material relating to cult – from the archives of Mari, Meskene and Ugarit for example – and by the Bible. It would seem, however, that a holistic, interdisciplinary account of Middle Bronze Age religion and cult is still lacking.

From most indications Middle Bronze Age Canaanite religion and its cultic expression, perpetuated a well-established belief system at least as ancient as the Neolithic. As all religions are, it was concerned with the universal themes of life, death and the essence of nature, and it operated with profound effect in Canaanite society. The massive investment of wealth and energy in mortuary practices gives some impression of the magnitude and fortitude of attitudes toward and the interconnectiveness of death, ancestors, the netherworld and the regeneration of life (see Window 2, p. 318). But beyond the personal expressions of religiosity, religious beliefs and cultic activity were manipulated to regulate behavior and reinforce political structures (e.g., Alon and Levy 1989; Rappaport 1971; Geertz 1975; Johnson and Earle 1987: 264, 324).

All the archaeological manifestions of MB cultic practice

Plate 6 The megalithic stelae of the Tel Gezer High Place (photograph: © HUC-JIR, Jerusalem)

Plate 5 A jewelry group from Tell el-Ajjul (courtesy Israel Antiquities Authority)

seem to have been in place by the MB I: open-air 'altars', stelae, the symmetrical, direct-axis Syrian or 'Migdal' temples and offering deposits placed in bothroi or in or under walls (e.g., Megiddo Stratum XIII, Nahariyah, Kfar Shmariyahu, Dan and Tell el-Hayyat). These early cultic phenomena tend to be small scale with the exception of the Obelisk Temple at Byblos, which contains all the aforementioned elements but on a much larger scale (Dunand 1958: 644–54). Sequestered offering deposits are the most frequently-observed cultic activity. These deposits generally contain metal weapons, stick pins and rings (the latter too large to be finger rings, too small to be bracelets and lacking the fastening apparatus of earrings), jewelry, miniature pottery vessels and metal figurines – mostly anthropomorphic (see Plates 2a,b; Plate 5). They have been interpreted as gift offerings presented to deities by society's elite – those with access to wealth – in reciprocation for gifts divine. By so doing the elite maintained its privileged position as intermediary between deity and the lower social orders, legitimizing its dominance over those orders. As a by-product, metal supply and metal's value as a gifting commodity were regulated (Philip 1988; Ilan 1992).

The employment of stelae as a medium of cultic focusing was already of great antiquity in the Middle Bronze Age and took on a number of forms reflecting disparate cult-related purposes (Graesser 1972). It has been suggested that the famous 'high place' at Gezer (Plate 6), with its alignment of megaliths, served as a 'convenant shrine' similar to later Delphi in Greece (e.g., Dever 1987: 167); these stones certainly communicated a public message, for they were visible from many kilometers away. The rather dense array of stelae – some obelisque-shaped and others more slab-like – at Byblos has sometimes been attributed a mortuary or

memorial significance (e.g., Albright 1966), while the stelae of the open-air Megiddo Stratum XIII sanctuary are generally held to represent a straightforward, divine immanence (e.g., Loud 1948: 87–92). The salient point regarding MB stelae is that they were probably imbued with a variety of social meanings and functions, all of which came under the auspices of deity. Manipulation of cult was a primary tool of the empowered elite but to some extent also served the purposes of the disenfranchised.

As the Middle Bronze Age advanced and social complexity grew, so too did the investment in institutionalized cult in the form of large planned cultic and palatial compounds at Megiddo (see Figure 8), Hazor, Alalakh, Ebla, Tell Mumbaqat, Shechem, Tell el Ajjul, and probably Tel Dan, imposed upon more prosaic earlier remains (e.g. Matthiae 1975; Mazar 1992). By the MB III, such complexes were most often dominated by monumental 'Migdal' temples, another cultural feature with origins in Syria (e.g., Mazar 1992: 167–9), raised on a constructed platform above their surroundings so as to be conspicuous from afar – like the great ramparts, a symbol of power and a further example of the resource-consuming, competitive emulation characteristic of peer polity interaction.

Socio-political disintegration and the ascendency of Egypt: transition to the Late Bronze Age

A widespread dissatisfaction with anecdotal and monocausal explanations for the collapse of complex societies has stimulated several scholars to seek underlying structural and processual factors to account for that collapse (e.g., Renfrew 1979; Tainter 1988; Yoffee and Cowgill 1988). Central to these studies is the idea, put succinctly by Tainter (1988), that collapse can be understood as a response to declining marginal return on investment in complexity – it is essentially an economizing process. Collapse does not imply the total erasure of social and political structures, rather it connotes their fragmentation and recomposition at a lower organiza-tional level. Concerning the Bronze Age in the southern Levant, Marfoe (1979), Bunimovitz (1989 and this volume) and Finkelstein (1993 and this volume) have all reconstructed the processes of disintegration in similar terms, and to this writer as well, they seem to carry great if not holistic explanatory potential.

Two mechanisms are most often invoked, and sometimes combined, to explain the disintegration of MB political structures; endogenous systems' collapse of the kind described above (and see also Bienkowski 1989: 176; Redford 1979; Hoffmeier 1989), and exogenous Egyptian incursions (e.g., Kenyon 1979; Dever 1990, Weinstein

1991). The hard evidence is mostly open to interpretation, and our ability to date and differentiate late MB and early LB material culture is severely limited, but it is now widely accepted that whatever the responsible agent, the process of site destruction and abandonment occurred over a fairly extended period of time – perhaps as long as 150 years (e.g., Seger 1975, Bietak 1991: 61–2). A multi-causal model is suggested here to explain socio-political disintegration in MB Canaan.

By the MB III socio-political complexity had reached a peak; integrative institutions were overextended relative to the production base and the marginal returns of complexity were declining. Resources were continuously being diverted into (a) prestige projects such as rampart, temple and palace construction, (b) an expanding non-productive elite, and (c) increasingly scarce and, therefore, costly commodities such as metal, while agricultural production at some point reached a plateau. Population was growing as well. This was a tenuous juncture; we must remember that for Mediterranean people, the uncertainty of the harvest was the rule, and drought and famine were always on the doorstep (Braudel 1972: 238–46). (A great drought in the time of Herod the Great almost cost that illustrious king his throne; he wisely imported great quantities of grain from Egypt at his own expense [Josephus, *Antiquities of the Jews* XV: 299–316]). In the Middle Bronze Age even a minor drought, undetectable in the sedimentological or palynological record, combined with a shortfall of food or seed reserves, could have brought the socio-economic periphery into the strongholds of the chiefs and kings to pillage and burn. The political contract held that the center (the urban or stronghold elite) provide protection from human enemies and risk management to counter the vicissitudes of nature, and that contract was apparently broken in many cases by the erstwhile redistributive centers (cf. the Beka'a Valley of Lebanon in the twentieth century; Marfoe 1979: 5–9).

This was also a point when many sedentary agriculturists would opt, as they had in the past and would in the future, for the alternate strategies of pastoralism and banditry (Braudel 1972: 85–101, 734–56; Marfoe 1979). These are groups that are difficult to disembed of goods and services, and who can reassert political autonomy at a lower level of organization (Yoffee 1988: 12–13).

Less important perhaps, but still a factor, is what Renfrew has called the 'confidence factor' (Cherry and Renfrew 1986: 155). Once polities begin to collapse, their limitations become apparent and their legitimacy comes into doubt. The processes of polity disintegration and reorganization in Canaan may have accelerated under similar conditions.

With the creeping failure of the social contract and the decline of agricultural production, a debilitating vicious

circle relating to Egypt was set in motion. Egyptian grain, traded for Canaanite wine and oil was a sort of safety valve for times of drought and agrarian stress. The scarcity of wine and oil probably led to increased prices for the Egyptians. Correspondingly, less grain was coming into Canaan as well. In the middle was Avaris (Tell el Dab'a), trying to maintain a profitable equilibrium, but also footing the costs of its own increasing complexity. All parties were subject to economic stress and its accompanying social strains, but it was the Egyptians who went to war against the Hyksos, beseiging and destroying Avaris (Dever 1987: 172 and references there).

The fall of Avaris would have been catastrophic for southern Canaan and certainly damaging to the economy of Egypt. The destruction of this great gateway meant that there was no longer any safety valve; institutional collapse in Canaan was probably hastened. One wonders how the victorious Egyptians dealt with the absence of the erstwhile commercial agent and the shortages of highly-valued imported goods. Two alternative explanations are plausible:

1. The Canaanite polities north of Sharuhen (Tell el-Ajjul) may have transferred their allegiance to the Eighteenth Dynasty rulers (Hoffmeier 1989: 190). These polities may, by this time, have undergone 'dynastic substitution' and political reorganization following revolt.
2. The Egyptians themselves made incursions into Canaan, not solely for the purpose of vengeance and booty (Weinstein 1981), but to depose a recalcitrant (or overcharging) Canaanite elite and replace it with a more malleable partner.

In any case, there is much to read between the lines of the few inconclusive Egyptian texts that depict the ejection and pursuit of the Hyksos and the transfer of power in Egypt.

The end of the Middle Bronze Age in the northern part of the country may have occurred at a different pace and been effected by different factors. Tels Dan, Kabri, Akko, Nahariyah and Hazor, for example, were all destroyed sometime within the 1600–1480 BC horizon (Weinstein 1981: 2–5); the archaeological data precludes greater temporal precision. Most of these urban centers seem to have been resettled, perhaps immediately, but the small MB sites known from the hills of Galilee were abandoned. A social implosion sparked by drought is the preferred explanation, with the Egyptian connection playing a lesser role. Hazor in particular, continued to be of a size, and to

play a role, on a wholly different scale. The twin factors of high productivity induced by irrigation and gateway trade and by redistribution appear to have maintained its position until the thirteenth century BC.

If our criterion for periodization is socio-political change, the demise of Avaris is perhaps a justifiable benchmark for determining the end of the Middle Bronze Age. Yet the Canaanite city states did not collapse abruptly or completely, as a literal interpretation of the PPI model might predict (Cherry and Renfrew 1986: 155). Nor is there a real hiatus in material culture. Indeed, a case can be made for ending the Middle Bronze Age with the campaign of Thutmose III, when Canaan came finally and decidedly into the Egyptian orbit (e.g. Seger 1975, Bunimovitz 1989; Weinstein 1981), though apparently retaining many of its social and political structures.

The partial collapse of political structures in the late MB did not bring about the collapse of Canaanite civilization. From most indications, cultural continuity was the rule – in religious beliefs and cultic practice, in certain status categories (such as the warrior), in mortuary practices, and in material culture attributes such as architecture, pottery traditions, metal utensils and the like. The death of Canaanite civilization occurred some 1000 years later, its foundations first chipped away by the highly centralized cultic and administrative institutions of the Iron Age, with the final demise brought about by population exchanges under the Assyrians and Babylonians and the destruction of the First Temple (cf. Yoffee 1988 for a concurrent and similar process in Mesopotamia).

SYMBOLS OF POWER AND MODES OF DEFENSE: THE GREAT RAMPART FORTIFICATIONS

MB fortifications are the single most impressive aspect of any large, and sometimes not so large, settlement. While they show several common guiding principles — mainly centered on the integration of free-standing walls and earthen embankments — their form varies according to local topography and function (Figure 1.1). The freestanding wall was often the first defensive edifice erected, particularly in the early MB. In most cases it was comprised of a stone socle surmounted by a mudbrick superstructure. Often such walls displayed offsets and/or citadel towers which served both defensive and constructive purposes. But these walls rarely, if ever, stood alone; terre pisée 'glacis' (to be distinguished from the freestanding embankments described below) were usually propped up against them from the outside (Figure 1.1a–b), and sometimes from the inside to preserve their foundations from being undermined by either rainfall or attacking sappers (Kempinski 1992b: 129). All these constructional techniques have antecedents in the Early Bronze Age (Parr 1968), though their employment in the MB was a more standard, yet more complex procedure that often resulted in a more formidable rampart than in the EB.

The real innovation is exemplified by the prodigious freestanding embankments used to create large enclosures on the level ground of the lowlands; the lower cities of Qatna, Carcemish, Ebla, Hazor (Plate 1.1 and Figure 1.1c–e), and the entire compounds of Kabri, Tel Batash, Yavne Yam, and Akko are good examples. These enclosures were not always fully occupied (e.g., Yavne Yam). The origins of this system appear to lie in Syria and Mesopotamia, in the canal and dyke building that was a ubiquitous part of irrigation agriculture (e.g., Kaplan 1975), though similar works were also characteristic of Egypt. In Mesopotamia such ramparts served a defensive purpose as well — witness the Muriq Tidnim ('keeping away Tidnum [people]') built against the Amorites by Shulgi in the Ur III period. There is some question as to whether freestanding embankments were crowned by brick walls since such walls are rarely preserved at the embankment apexes. At Carcemish (MB I/II), Mardikh (MB I/II), and Tel Nagila (MB II), however, freestanding embankments of one kind or another were surmounted by mudbrick walls (Parr 1968: 33; Wright 1985: 184), and other eroded embankment structures show layers of brick debris at or near the surface, e.g. Hazor (Yadin 1972: 54).

The third type of rampart construction (Figure 1.1f) has only recently been isolated and is only partly related to defense: it entails the structural extension and elevation of an entire settlement (Lederman 1985; Ussishkin 1989). At sites such as Jericho, Shechem, Tel Dan and Shiloh massive stone revetments were constructed, and earthen fills deposited behind and in front of them, to create wider and higher platforms for the construction of crowning walls (usually lacking but recently found in Tel Dan Area T3) or large public buildings such as the tower temple at Shechem. A site once considered a classic 'Hyksos' example of embankment fortification, Tell el-Yahudiyeh in the Egyptian delta, was convincingly placed in this category already by Wright in 1968. Constructions of this type
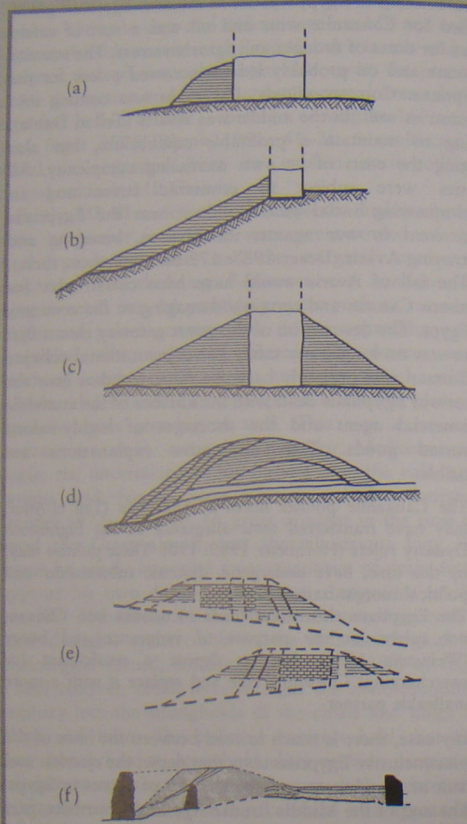

Figure 1.1 Various types of MB rampart fortification. Adapted from Kempinski 1992b and Kaplan 1975

generally imply a planned, concentrated effort and not successive increments to a fortification over time. With the exception of the Tel Dan example, dated to the MB I, these appear to be a feature of the MB III — an important observation in processual, socio-political terms.

It is usual to find a fosse at the base of all three rampart variants, which in special cases (Qatna, Kabri, Dan) may have been flooded to form a moat, if a water source was available (Kempinski 1992d).

What were these huge ramparts meant to defend against? Their very size and complexity have major socio-political implications. Traditional explanations 'explained [sloping banks of plastered earth] variously and confusedly as to facilitate archery, to incommode archery, to keep chariots in, to keep chariots away, to inhibit battering rams, to prevent the application of fire-brands etc. etc.' (Wright 1968). Some of these explanations are undoubtedly valid, especially those

concerning sapping and the increased range of the composite bow (Kenyon 1966, Yadin 1963; Stager 1991: 8), though Yadin's 1955 anti-battering ram hypothesis has been invalidated by Wright (1968: n. 20). The idea that the glacis was intended as consolidation and protection against both erosion and seige techniques, when tel slopes were becoming steeper, more exposed and increasingly vulnerable, has also gained wide acceptance (Parr 1968; Wright 1968).

However, a new conjecture is now gaining currency — one that emphasizes the social and political roles implied by rampart conception and construction, and one that views such tremendous undertakings as an expression of the emulation and competition characteristic of peer-polity interaction. Beyond their purely tactical function, ramparts were stategically imbued with a symbolic, propagandistic content that proclaimed the power of the polity vis-à-vis other polities, and of the ruling elites vis-à-vis the ruled (Dever 1987: 154–6; Herzog 1989; Bunimovitz 1992, and this volume, Chapter 19; Finkelstein 1992). Seen in this way, the ramparts are the pyramids or ziggurats of Canaanite civilization — a sort of conspicuous consumption of society's most precious resource: human energy.

The ramparts of Hazor are comprised of more than 1,000,000 m³ of earth while smaller sites have been estimated to require less; Shiloh contained 45,000 m³ (Finkelstein 1992). Assuming that a worker can move approximately 1 m³ of earth per day (see references in Finkelstein 1992: 209), it becomes clear that hundreds of thousands — and sometimes millions — of hours were required to erect a rampart. Given both the demands and the potential surpluses of an agrarian economy, Finkelstein has adopted the estimate that 20 percent of a given population were available for construction corvée ca three months per year, inferring that in sites the size of Shiloh and Dan, with only tens or hundreds of workers available from the
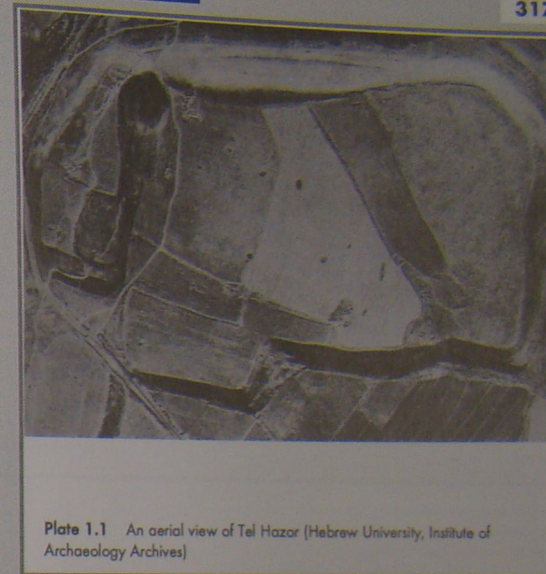

Plate 1.1 An aerial view of Tel Hazor (Hebrew University, Institute of Archaeology Archives)

settlement itself, a rampart might have taken many years to construct with the attendant risk of heavy winter rainfall undoing the previous season's labors. Hence the suggestion that the ruling authority was utilizing labor from the surrounding countryside, indicating some measure of political (and economic) control over that hinterland (Finkelstein 1992).

This strategy of resource allocation to symbols of power seems to have paid off for a while. The lack of destruction layers in most MB levels, until the final collapse that is, points to this interpretation. But by the MB III, the human resources and material surpluses they consumed, added to their unfulfilled promise of protection, may have been important factors in socio-political collapse.

DEATH IN CANAAN: MORTUARY BEHAVIOR AS A REFLECTION OF SOCIETY AND IDEOLOGY

Considering the wealth of information available, mortuary remains have been perhaps the most neglected manifestation of MB society. MB burial assemblages are of particular importance because they are frequent, widely and evenly distributed, and take on variety of form and context that probably reflects a cross section of contemporary society. Of great diachronic importance is the existence of intramural tombs under successive living surfaces of settlement layers, in addition to extramural cemeteries.

Burial types   Six general tomb categories can be distinguished (Figure 2.1). Rock-carved chamber tombs, masonry chamber tombs, shaft burials (usually in combination with chamber tombs), masonry cist tombs, simple pit or cist burials, and jar burials. These can be subdivided by size and geometric form. How do we explain this variety in behavioral terms?

Social status and burial   A detailed study of the Tel Dan mortuary remains (Ilan, in press a and b) has indicated that in the context of a given intramural cemetery, the coexistence and spatial relationships of chamber, cist, shaft, pit and jar burials can best be explained by subordinate (demographic) status differentiation and kinship affiliation. Chamber tombs (masonry only) contained the skeletal material of both male and female individuals over the age of 13 years, cist tombs the remains of individuals 3–12 years, and jar burials infants under the age of 2–3 years and fetuses. This patterning is culturally suggestive; the age of 2–3 years is typically associated with a sharp downswing in mortality rates and a corresponding change in social status (e.g., Binford 1972: 233; Krahfeld-Daugherty in press; Steele in press; and references in both), while the age of 12–13 years is associated in many societies with further status enhancement and with rites of passage leading to adulthood (e.g., van Gennep 1960).

Superordinate (ascribed) status and wealth differences are not clearly attested to in the mortuary sample from Tel Dan or in other cemeteries. Ascribed status or ranking is commonly held to be indicated by widel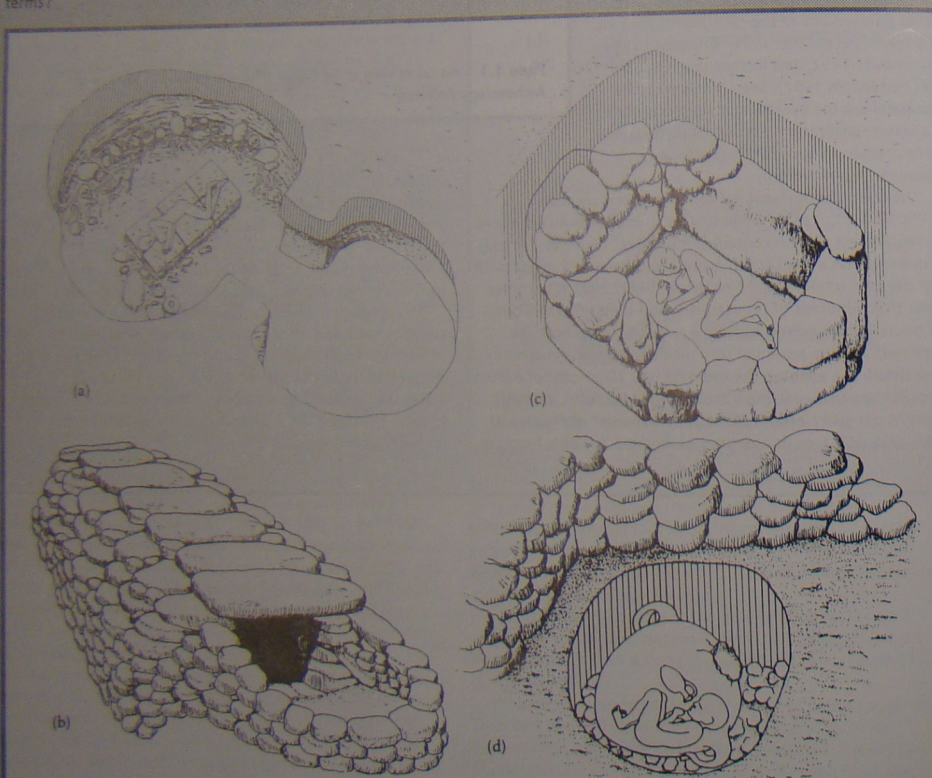y variant assemblages within a specific demographic category or by offering differentiation that cross-cuts demographic categories (e.g. Peebles and Kus 1977). In a hypothetical representative sample, the juvenile interments for example could be expected to show a few offering assemblages richer by several degrees than the majority of juvenile burials, and a similar pattern might be expected for other demographic categories. So-called 'rich' MB tombs are generally those with a long sequence of multiple successive burial with little evidence of plunder. The Jericho tombs are a likely candidate for an explanation of this kind. Finally, tombs always were the prime targets of plunder, especially in times of scarcity, and the symbols of prestige and wealth were probably those carried off.

One burial type that does stand out as an indicator of rank is the warrior burial, which typically is comprised of an adult male buried with weapons, a belt, and sometimes an equid. Early MB burials of this type are better known due to the period's greater propensity for single burial – for example, at Baghouz and Beth Shean (Oren 1971) – but the phenomenon continues into the MB II and MB III as well (Philip in press).

Kinship affiliation is expressed by the clustering of different demographically ordered tomb types under domestic living floors and the technique of multiple successive burial points to familial affiliation (cf. Woolley [1976: 33–5] and Salles [1987] for similar ordering at Ur and Ugarit). Early MB I cist tombs contain single burials, more in the Intermediate Bronze Age tradition, but thereafter chamber tombs and cist tombs contain multiple successive interments. Jar burials are often located next to or over cist tombs or chamber tombs.

Cosmological inferences   Many patterns in MB mortuary remains are ubiquitous for all tomb types and for all age and sex categories. These can be explained as symbolic behavior motivated by concepts of rebirth, afterlife and fertility. The tomb itself can be seen as a simulation of the female reproductive organs (chamber, opening, shaft) while the usual contracted (fetal) position of the skeleton and proximity of the head to the tomb opening represents the prenatal state.

Death and rebirth were considered part of the fertility cycle observed in the natural world, and particularly in agriculture. This is evident from the Ugaritic Baal Epic (I AB: II: 30–7) and the Birth of the Gods Good and Fair (e.g., Gordon 1949: 59) where Mot, the god of death is killed by Anat in terms of the grain harvest or the pruning and binding of the grapevine. Genesis 3 can also be understood as reflecting the relationship between death and the fertility of man and nature (Ilan forthcoming).

Finally, the post-interment offerings (called kispum in contemporary and later texts) found frequently over or near MB tombs, serve as testimony to the continued reference of the living to the dead, perhaps providing venerated ancestors with honor and sustenance, or perhaps to placate a potential agent of social disruption (e.g., Skiast 1980).

Figure 2.1   Frequent MB tomb and burial types: (a) rock-carved tomb, (b) masonry chamber tomb, (c) masonry cist tomb, (d) jar burial of an infant or fetus.