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THE MIDDLE BRONZE AGE OF THE EUPHRATES VALLEY, SYRIA: CHRONOLOGY, REGIONAL
INTERACTION AND CULTURAL EXCHANGE

by

ELISABETH NORTH COOPER

A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Graduate Department of Near and Middle Eastern Civilizations
University of Toronto

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THE MIDDLE BRONZE AGE OF THE EUPHRATES VALLEY, SYRIA:
CHRONOLOGY, REGIONAL INTERACTION AND CULTURAL EXCHANGE

Elisabeth North Cooper

For the Degree of Doctor of Philosophy, Department of Near and
Middle Eastern Civilizations, University of Toronto, 1996

ABSTRACT

The essential purpose of this study was to formulate a Middle Bronze Age ceramic
chronology that could be used to determine the relative dates of archaeological sites located
in the Euphrates Valley of Syria. Through a study of the pottery from the Middle Bronze
sequence at the site of Tell Hadidi, I identified diagnostic vessel types that were thought best
to characterize successive phases of the Middle Bronze Age. Following this, I reviewed the
current ceramic evidence from excavated sites along the river and attempted to fix those sites’
occupations within the newly defined phases of the Middle Bronze Age on the basis of the
presence or absence of these diagnostic categories. The study successfully determined the
relative placement of nearly all of the major sites located in the “Big Bend” and the Mari
region of the Euphrates Valley within distinct phases of the Middle Bronze Age.

The formulation of the Middle Bronze Euphrates chronology made it possible to study
two important issues. First, it was possible to clarify the Euphrates Valley’s chronological
position relative to the Levant, based on a re-evaluation of the Levantine evidence and its
correspondence with the newly structured Euphrates pottery sequence. Second, the
chronology facilitated an investigation of cultural relationships between contemporary
Euphrates sites. This inquiry led to new insights about intra-riverine relationships, particularly
those involving political and economic exchange.
PREFACE

I would like to take this opportunity to acknowledge my thanks those who assisted me in the preparation and completion of this dissertation. My largest debt is to my supervisor, T. Cuyler Young Jr., for his direction and advice during all stages of this work. Professor Young guided me through my endeavours at pottery classification, patiently read through early drafts of this work, and cleaned up my style and prose in the final stages of its preparation. I am also grateful to him for providing me with part-time work as a research assistant in the West Asian Department of the Royal Ontario Museum, and authorizing my access to the department's library and computer equipment, without which this dissertation could not have been written.

I am also grateful to Professor J.S. Holladay (Department of Near Eastern Studies, University of Toronto). It was he who first proposed that I write about the Middle Bronze Age in Syria after I had to abandon my plans to carry out research in Iraq. He made a valuable critique of the most crucial parts of this dissertation, and served as an important source of inspiration, enthusiasm and encouragement.

Several others in Toronto lent their expertise and assistance. Douglas Frayne directed my attention to relevant textual documentation for the second millennium B.C. Bruce Routledge offered some useful pottery-drawing tips. At the Royal Ontario Museum, Dr. Robert Mason allowed me to use his binocular microscope to study the Tell Hadidi sherds and introduced me to the joys of Corel Draw. He also acted as a sounding-board for several of the ideas that appear in the latter part of this dissertation. Jean Charing answered countless questions about computers, printers, and electronic mail. Bill Pratt kindly provided storage
and study space for the Tell Hadidi pottery in the West Asian laboratory, and put up with my occasional lack of enthusiasm for jazz music.

In the United States, I wish to thank Professor Rudolph Dornemann, who first suggested that I study the Area F pottery from his excavations at Tell Hadidi, and who authorized my transfer of the assemblage from Milwaukee to Toronto where I could study it at length. I would also like to thank Carter Lupton of the Milwaukee Public Museum, who supervised the transfer of this material.

Professor J-C. Margueron kindly authorized my study of the pottery from Parrot's excavations at Mari. I am grateful to Hamido Hammade of the Aleppo Museum in Syria, who graciously provided me with access to this Mari pottery as well as material from Baghouz and Qatna, and who ensured that my visit to the museum was both productive and comfortable. I would like to thank Tom and Anne McClellan of the Tell Banat Project in Syria, who provided me with access to unpublished pottery from their previous fieldwork at el-Qitar. Tom McClellan also took the time to read an early draft of my introduction and made constructive comments.

Financial support for my graduate studies and research has been provided by the University of Toronto Open Fellowship (1988-93), the Dr. Mercer Scholarship in Near Eastern Studies (1990) and the Associates of the University of Toronto Travel Grant Fund (1992). I would also like to thank Professor Kirk Grayson for providing me with steady part-time employment at the Royal Inscriptions of Mesopotamia Project.

Friends and family members offered eventful and pleasant diversions from long days of examining unattractive Middle Bronze sherd profiles. In particular, I would like to thank
Michael McLaughlin, Sheila and Steve McCutcheon, Sue and John Van Oosten, Reena Zeidman, Linda Wilding, Hope Grau, and Cindy Nimchuk for their friendship.

My deepest gratitude is offered to my parents, Reed and Jane Cooper. They sparked my early fascination with the ancient Near East, encouraged me in my distant travels and fieldwork, and saw me through the difficult task of completing this work with their financial and emotional support. This dissertation is dedicated to them, with admiration and affection.
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CHAPTER I
SETTING, PROBLEMS, AND OBJECTIVES

Throughout antiquity the Euphrates River played an important role in the development of trade, inter-regional communications and cultural exchange among the principalities of Greater Mesopotamia. Even as early as the advent of urban civilization and the invention of writing, the Euphrates River served as the principal avenue along which information in the form of technological innovations, artistic developments, social and religious movements and new political ideologies, was transmitted and exchanged among the human populations settled along and beyond its banks. Moreover, the Euphrates’ geographical access to several resource-rich regions of the Near East encouraged the growth of long-distance trade within Mesopotamia, the river serving as one of the principal means by which highly prized materials such as metals, precious stones and timber were conveyed to the urban centres of the south.

Perhaps the greatest wealth of historical information about the Euphrates River in antiquity derives from Syria, from a large collection of cuneiform tablets discovered earlier in this century at the site of Mari. These texts were found in several rooms of a palatial complex dating to the first half of the second millennium B.C. At this time, several independent Amorite city-states, including Mari, had established major centres along the Euphrates River. The tablets from the palace archive provide useful information about the role of the Euphrates in Syria in the years immediately before Mari’s destruction by the Babylonians in 1761 B.C. For example, they document Mari’s monopoly over the commercial networks of the Middle Euphrates, and the enforcement of taxation stations at
strategic points along the river (Burke 1964). The rulers of Mari also used the Euphrates River for staging military campaigns to the north and west (Dossin 1955; Frayne 1990: 602-608; Charpin 1994: 181-82), for visiting foreign religious centres (Mayer 1987: 143-44), and for conveying diplomatic ambassadors to neighbouring kingdoms in an effort to establish commercial and political alliances (Munn-Rankin 1956: 99-108).

Recently, second-millennium B.C. cuneiform documents have surfaced at other Euphrates sites in Syria. Notable are the archives found at Terqa, which document the period of the Khana rulers who controlled the Euphrates River after the demise of Mari (Buccellati 1988). Scattered texts have also been found at the site of Tell Bi’a, located at the confluence of the Balikh and Euphrates Rivers. The tablets confirm the identification of Tell Bi’a as ancient Tuttul, an important centre on the borders of Mari’s dominion. Tuttul was chiefly responsible for safeguarding the political boundary between Mari and Yamhad, Mari’s rival to the northwest, and overseeing the trans-shipment of goods arriving in the Mari kingdom from points beyond its borders (Mayer 1987: 122-39).

In addition to the wealth of textual sources dating to the first half of the second millennium B.C., archaeological investigations in Syria have provided considerable information about the Euphrates Valley during this time. Notable are the archaeological investigations undertaken by the French at Mari, beginning with Parrot’s excavations in the 1930s. Parrot’s discovery of the monumental Palace of Zimri-Lim, with its maze of courtyards, reception halls and storerooms, represented the first example of early second-millennium urban architecture encountered in Syria (Parrot 1958). Moreover, the findings
at Mari confirmed that the Syrian Euphrates Valley was not a cultural hinterland of southern Mesopotamia, but consisted of a complex and unique cultural heritage in its own right.

More recently, the salvage excavations in the "Big Bend" region of the Euphrates river have produced further information about the early second millennium B.C. in Syria. Several Middle Bronze urban centres have been found along this stretch of the river, many of which are characterized by monumental structures and fortifications (Heinrich et al. 1974: 12-27; Dornemann 1979: 132; McClellan 1986: 94-95), revealing a sophisticated settlement system otherwise unattested in this region for this time period. German excavations at Tell Bi'a have confirmed that Tuttul was also a formidable city in the early second millennium B.C. It possessed a grandiose palace or governor's residence designed in the same style as the Palace at Mari (Strommenger et al. 1987: 10, Abb. 2), a monumental temple complex that was possibly dedicated to Dagan, the tutelary deity of that city (Strommenger et al. 1989: Beilage 1) and extensive fortifications and gates (Strommenger 1980: 30-31).

Despite the wealth of textual information and archaeological evidence from these early second-millennium Syrian sites, few attempts have been made to combine the two sources of data in an effort to establish a chronological sequence that characterizes the Euphrates Valley of Syria in its entirety. Such a chronological sequence is useful for a number of reasons. First, it provides a starting point for the formulation of a larger Near Eastern chronology in which the separate chronologies of Mesopotamia, Syria, the Levant and Egypt can be united within one prevailing temporal sequence. Attempts made in the past to devise such a chronology have been largely unsuccessful, mainly because the evidence for important chronological links between Mesopotamia and the remainder of the Near East have been
either poorly documented or vaguely understood. A well-defined sequence for the Syrian Euphrates Valley, especially given the region's contacts with both Mesopotamia and the Levant, would clarify the link between these regions, and resolve some long-standing chronological conundrums.

An equally important advantage of a Euphrates chronology is that the processes of inter-site interaction and cultural exchange within the Euphrates Valley itself can be assessed more accurately. Meaningful statements about these phenomena cannot be made until there is a clear idea of how the sites within the region relate to one another chronologically. How can one discuss, for example, the existence of political competition between two sites, if the evidence from one site is dated a century earlier than the evidence from the other site? Moreover, supporting historical information provided by textual sources is virtually useless if the sequence of events can not be correlated with the artifactual evidence from the sites involved. Obviously, a fine-tuned chronological sequence that establishes the contemporaneity of both textual sources and all of artifactual evidence and lays out the data in a well-ordered sequence provides the necessary framework for investigations of this nature.

Unfortunately, the establishment of a regional chronology for the Syrian Euphrates Valley is not a straightforward matter. While a few of the Middle Bronze Age sites such as Mari, possess datable textual sources that facilitate accurate synchronisms between certain Middle Bronze Age contexts, the majority of sites have no such evidence and, consequently, chronological correlations between separate occupational contexts or sites must be sought through other means. The situation is particularly difficult in the northern Euphrates Valley of Syria, where none of the sites possess any cuneiform documents that date to the Middle
Bronze Age, and there are virtually no other types of artifacts that provide any clear and direct links to known historical events documented in the textual sources.

It is clear that in order to build a chronology that incorporates evidence from all known Middle Bronze Age occupation within the Euphrates Valley, one must first seek to establish a "relative" chronology based on similarities among artifact types from different sites. Artifacts that are thought to share a number of characteristics, either in style, execution or fabric, are generally thought to be products of approximately the same time period. Consequently, the archaeological contexts in which they were found are also thought to date to the same time period. This method of cross-dating, or "relative" dating is a popular means of building a chronology, and is generally favoured among archaeologists who must work with evidence that has little or no association with historical events and absolute dates.

For the construction of a "relative" chronology, several types of artifact classes can be investigated. Chronological synchronisms may be sought through an examination of similarities in architectural style, for example. A clear case demonstrating the establishment of relative dates based on architectural comparisons is provided by structural remains excavated in an early phase of occupation at the site of Habuba Kabira, situated on the Euphrates River. The distinctive, monumental architecture characterizing this phase was dated to the Late Uruk period (3400-3100 B.C.), based largely on its parallels to the well-known Late Uruk tripartite architecture found at Warka and other southern Mesopotamian sites (Strommenger 1980: 31).

Convincing parallels in architecture, however, are not particularly common. Many architectural styles, particularly those of domestic or work spaces, tend to be widespread and
universal in conception. In such cases, parallels between structures may be more a matter of coincidence or a reflection of their practical function, rather than a meaningful reflection of the structures' contemporaneity. Another problem with the use of architecture is that in many cases, certain building designs and techniques of construction are very slow to develop or change; old traditions can be maintained over hundreds of years. In Syria, a prime example of the conservative tendency in architectural design is provided by structures known as "long-roomed" temples. These large, single-roomed buildings first appear in Syrian contexts dating around 2500 B.C., and continue, virtually unchanged, until about 1200 B.C., a time span of over a thousand years. Clearly this type of architectures does not lend itself well to assessments of contemporaneity and chronological development.

The usefulness of objects made of metal or other precious materials (i.e. ivory, semi-precious stones) in establishing a relative chronology is also somewhat limited. First, it should be remembered that because metals and other precious materials are difficult to procure, objects comprising these materials are relatively infrequent. It is not surprising that such objects are only rarely recovered by archaeologists. Given this situation, one is often faced with too few artifacts with which to make parallels and establish relative dates. The other problem is that where examples of metal or other precious artifacts are recovered, there is always the possibility that the objects are heirlooms; that because of their value, the objects were saved or re-used over an extended period of time. Consequently the date of the contexts in which the objects were excavated may be considerably later than the time in which the objects were initially manufactured. In the Near East, several examples may be cited in which
particular metal objects have been regarded as heirlooms and, consequently, the context in which they were found cannot be dated with certainty (Dever 1991: 75; 1992: 8).

The most popular artifact type used in chronology-building is pottery. Pottery has many advantages. First, not only is pottery abundant at all historic-period sites in the ancient Near East, it is found in a large variety of contexts, thus facilitating the degree to which it may be used in establishing parallels and assisting in the cross-dating of archaeological contexts. Pottery is also sensitive to developments over time. In most cases, the particular style of a pot, or the way in which it is manufactured, has only a short duration before new styles and manufacturing techniques are introduced. Because of this tendency for relatively rapid development and change, pottery can be an effective tool in delineating specific periods of time in the archaeological record. Moreover, the fact that pottery is inexpensive and breaks easily reduces the chances of finding heirlooms in primary archaeological contexts.

Establishing relative chronological sequences based on observations of pottery and changes in ceramic style over time is common in the study of Mesopotamian archaeology. Pottery chronologies are particularly common for the prehistoric periods, for which textual sources are unavailable. Joan Oates’ chronology of the Ubaid period of southern Mesopotamia, for example, is built largely on observations of changes in the appearance and painted decoration of Ubaid vessels (Oates 1983: 260-62). Another example is the pottery chronology of the so-called “Ninevite 5” period of northern Mesopotamia. Although the Ninevite 5 period is contemporary with the Early Dynastic period of Sumer, the lack of documentary evidence from the north has resulted in the formulation of a sophisticated ceramic chronology that attempts to fit each of the Northern Mesopotamian mid-third-
millennium occupational contexts into a well-defined sequence. The Ninevite 5 chronology is largely dependent on changes observed in the painted and incised techniques used on pots from stratified contexts found in both northern Syria and Iraq (Roaf and Killick 1987; Rova 1988; Schwartz 1988; Numoto 1991, 1992).

Outline of Study

Given the considerations for chronology-building outlined above, the following study has chosen to formulate a Middle Bronze Age chronological sequence for the Euphrates Valley of Syria based primarily on a comparative analysis of pottery from excavated contexts. By measuring the degree of ceramic stylistic similarity among assemblages, it is possible to establish the contemporaneity of the contexts with which they are associated, and to determine their position within a regional chronological sequence.

The chronological study begins with the formulation of a Middle Bronze Age pottery sequence from the site of Tell Hadidi, located in the “Big Bend” region of the Euphrates River in northern Syria. This sequence is based upon stylistic changes observed within a large corpus of previously unpublished pottery sherds, derived from successive layers of a stratified deposit in one area on the tell (Area F). Further refinements and additions are made to this sequence with the incorporation of information provided by published ceramic material from one other major archaeological context at the site (Area B). The result is a Hadidi sequence comprising sub-phases defined by diagnostic vessel categories. The characterization of these phases will in turn serve as a base for further chronological inquiries throughout the Euphrates region.
The study proceeds with a determination of the chronological position of all other Euphrates sites relative to the Tell Hadidi sequence. This is achieved by assessing the degree of similarity or variance of each sites’ ceramic corpus to the Tell Hadidi assemblage, as defined by its diagnostic categories. High levels of similarity are thought to indicate contemporaneous assemblages, while differences suggest that the assemblages derive from earlier or later time periods. Although the best results in this regard can be achieved through a comparative analysis involving considerations of a large set of ceramic variables (i.e., form, fabric, colour, technique of manufacture), the current study limits itself to a simple comparative analysis of the pots’ stylistic attributes and forming features, acknowledging the limitations of the bulk of the data from the published Middle Bronze Age sites under investigation. Many of the published reports of these sites are in preliminary format only, providing little more than simple sherd profiles and very general descriptions of the pottery under examination.

While this chronological study is an effort to establish temporal synchronisms among sites through evidence provided by the archaeological record, namely pottery, the textual sources are not disregarded altogether. In some cases, particularly within the Mari region, well-dated textual documents from various occupational contexts are used to understand and clarify the internal sequence of a particular site. Dated textual sources also serve to verify some of the chronological conclusions reached through the ceramic analyses, thus confirming the value of this method of inquiry.

Having established a Middle Bronze Age chronology for the Syrian Euphrates Valley, the next section explores ways in which a broader, Near Eastern chronology can be
constructed for the first half of the second millennium B.C. First, past attempts to establish chronological synchronisms between Mesopotamia and the remainder of the ancient Near East are described, along with reasons why these schemes should be rejected. The discussion ensues with an alternative strategy that involves the use of the newly constructed Euphrates sequence. A relative chronology is devised, based on pottery parallels and other object correlations, in which reliable synchronisms are first established among neighbouring regions before attempting to unite all of the data into one prevailing chronological sequence.

Finally, the last section explores some aspects of inter-site cultural developments and exchange within the Syrian Euphrates Valley during the Middle Bronze Age. With the chronological framework in place, in which the temporal position of historical events and artifactual developments throughout the region are well understood in relation to one another, it is possible to make further investigations into the nature and extent of regional interaction. Given that the textual sources from Mari and other sites provide ample information about the division of the Euphrates Valley into distinct political principalities, one area that is explored is the extent to which contemporary artifacts, namely pottery, reflect this political geography, and what further information about settlement relationships and cultural distinctions can be gleaned from such an inquiry. In general, the study intends to demonstrate the utility of combining textual and artifactual data whenever possible in the study of ancient societies, in the belief that such evidence will result in a deeper understanding of the dynamics of cultural processes and cultural exchange.
CHAPTER I ENDNOTES

1. Some remark should be made here about the use of “absolute” dates for the period falling roughly within the first half of the second millennium B.C. Some of the Middle Bronze Age Euphrates sites have yielded textual evidence, which describes events, or contains the names of well-known individuals or year-names (a system of dating by “naming” each year was in practice during this time) that can be accurately positioned within a fixed point in time in the history of the region. Furthermore, these events have been assigned “absolute” dates based on the astronomical reckonings provided by the famous “Venus” tablets, devised at the end of Babylon’s First Dynasty. Unfortunately, these “Venus” tablets have provided not one but several possible “absolute” dates, because the same movements of the planet appear to have occurred more than once during this time period (Oates 1986: 24). Consequently, there are three possible dates for the year of Hammurapi’s accession (1900 B.C., 1792 B.C. or 1704 B.C.). Most Assyriologists seem to prefer the so-called “middle” chronology, which accepts the date of 1792 B.C. for the accession of Hammurapi and 1595 B.C. for the year when Babylon was sacked (Rowton 1962: 61-63).

The “middle” chronology is also followed in this study. Thus, since we know that Mari was sacked by the Babylonians in the 32nd year of Hammurapi, the last year of Zimri-Lim’s reign at Mari can be dated to 1761 B.C. according to the “middle” chronology. All other historical events occurring at Mari and elsewhere in Syria can be subsequently tied to this event and dated accordingly. I must emphasize that the “middle” chronology is used here only for convenience’ sake and is by no means thought to be incontrovertible. Further work is still needed to confirm the accuracy and validity of the Venus observations. Moreover, accurate chronological synchronisms with other Near Eastern chronologies need to be determined before final “absolute” dates for the events of the early second millennium B.C. in Mesopotamia can be established.

2. For example, Areas A and C and the Palace of Zimri-Lim at Mari may be safely synchronized on the basis of textual documents found in those contexts, which supply the names of well-known persons and year-names whose positions in time are well understood in relation to one another. See pp. 222-23 in this study for a survey of these documents.

3. The earliest “long-roomed” temples (Antentempels) were excavated at Tell Chuera in northern Syria (Orthmann 1990: 1-18), while the latest have been found at Tell Meskene/Emar, whose destructions are dated to 1187 B.C. (Margueron 1977: fig. 11).

4. See, for example, Dever’s discussion of the fenestrated (“duckbill”) axes discovered in the Tomb of the Lord of the Goats at Ebla along with more developed Middle Bronze Age pottery (Dever 1992: 8), as well as his views regarding the value of certain Egyptian scarabs for dating the strata at Tell el-Dab’a (Dever 1991: 75).
CHAPTER II

DESCRIPTION OF THE STUDY AREA: THE SYRIAN EUPHRATES VALLEY
AND EXCAVATED MIDDLE BRONZE AGE SITES

II.1 Introduction

This chapter describes the region and sites of Syria that constitute the central focus of the dissertation. It begins with a brief overview of the geography of the Euphrates River Valley in Syria, extending from the "Big Bend" in northern Syria to the Mari region near the modern border between Syria and Iraq (section II.2). This is followed by a general description of the Middle Bronze Age sites within this region and a brief summary of the excavations that have been carried out at these sites (section II.3).

II.2 Geography of the Syrian Euphrates Valley

The Euphrates River, in its 1400 km journey through the Syrian plateau, is characterized by a meandering channel that flows through a deep valley, 4-12 km wide. On either side of the valley, rising up to 80 m above the Euphrates floodplain, are the escarpments of two deserts. The Syrian desert to the west, which constitutes a rocky and hilly area with little vegetation except for short grass and scattered shrubs, extends to the Orontes Valley (Simpson 1983: 69). To the east, the undulating, stony plain of the Jezirah desert extends as far as the Tigris Valley and north to the outliers of the Taurus mountains (Hamlin 1971: 210).
While the narrow floodplain of the Euphrates Valley in Syria is the location of human settlement and agriculture, the steppe land of the surrounding deserts is mostly uninhabited, save for semi-nomadic groups who exploit the steppe’s grassland for seasonal sheep and goat pasturage. This was also the situation during the first half of the second millennium B.C. All of the major settlements of the Middle Bronze Age were located along the banks of the Euphrates River within the limits of the fertile floodplain, while a number of pastoral-nomadic Amorite tribes occupied the marginal steppe lands of the surrounding Syrian and Jezirah deserts. In general, a kind of symbiotic relationship existed between the populations of these two macro-environments. While the sedentary communities of the Euphrates Valley benefitted from the pastoralist’s supplies of meat, milk products, skins and wool (Luke 1965: 27), the pastoral groups in turn depended on access to the Euphrates River, particularly when the dry months of summer forced these groups to move their flocks near the only available source of water. Contemporary historical texts from Mari indicate that some of the pastoral tribes even maintained permanent settlements in the Euphrates Valley, utilizing adjoining tracts of land for seasonal agricultural pursuits (Luke 1965: 277-78). Although the historical sources frequently report incidents of disruption and conflict arising from the presence of these pastoral groups in the Euphrates Valley, one suspects that the conflicts were not the result of friction between the “desert and the sown” but, rather, between the tribal rural groups and the political authorities of the urban centres, who frequently attempted to tax, enumerate and constrain these groups (Luke 1965: 243-64).

 Broadly speaking, the Euphrates Valley of Syria can be divided into two distinct regions, both of which were settled during the Middle Bronze Age. The northern stretch of
the Euphrates is characterized chiefly by the “Big Bend.” In this area between the Turkish/Syrian border and the confluence of the Balikh and Euphrates Rivers, the Euphrates alters its southwesterly direction, veering dramatically to the east. Much of the Euphrates Valley in the “Big Bend” region is now submerged below a large artificial lake some 80 km in length and 8 km wide, the result of a massive dam constructed at the site of Tabqa in the 1970s. Fortunately, archaeological survey and salvage work were conducted in the “Big Bend” before the completion of the Tabqa dam, providing considerable information about the ancient settlement history of this particular region. It would appear that this region of the Euphrates was populated from the Neolithic Era through to the Islamic period (Dornemann 1985: 52-53). While the majority of settlements along the Euphrates Valley were agricultural villages and towns, there were also several urban centres within the “Big Bend” valley, particularly during the Early and Middle Bronze Ages. No doubt the area’s location along a popular trade route between Southern Mesopotamia, Anatolia and the Mediterranean coast encouraged the growth and prosperity of these urban centres during these periods.

Since the “Big Bend” of the Euphrates Valley falls only just above the 250 mm isohyet of mean annual rainfall, the minimum requirement for dry-farming, it is likely that some form of artificial irrigation was also practised in order to achieve maximum yield of agricultural produce in this region. Although offering sufficient agricultural products to sustain the local population, this section of the Euphrates Valley has never been a “breadbasket” of prime farmland. The cultivable strip of the floodplain is too narrow, and natural boundaries in the form of the two escarpments that surround the valley prohibit any expansion of territory to be brought under cultivation (Simpson 1983: 74).
Southeast of the Tabqa dam, the Euphrates river continues to flow in a southeasterly direction, being supplemented by the Balikh and Habur Rivers entering on the left bank, before reaching the Syrian/Iraqi border. Like the “Big Bend” region, the flood-plain of the Euphrates Valley in the southern part of Syria is narrow, resulting in a limited area of land available for cultivation. Moreover, all of the Euphrates region below the Balikh River falls below the 250 mm isohyet, making agriculture difficult and necessitating artificial irrigation at all times (Buccellati 1988: 44). As a result of these conditions, the southern part of the Euphrates Valley was less densely populated than the “Big Bend” in antiquity, and was capable of supporting only one or two major urban centres at any one time. During the Early and Middle Bronze Ages, the chief urban centre in the region was the site of Mari, situated below the Habur River at a strategic point where several river channels and man-made transport canals converge before flowing into Iraq (Margueron 1991: 89-91). For the purposes of this study, the southern region of the Euphrates Valley in Syria has been designated as the Mari region, acknowledging Mari’s eminence as the major urban centre during the time period under investigation in this study.

II.3 Descriptions of Excavated Middle Bronze Age Sites in the Syrian Euphrates Valley

Introduction. This section provides descriptions of the excavated ancient sites along the Euphrates River in Syria that possess occupation and artifactual evidence dating to the Middle Bronze Age (circa. 2000-1500 B.C.) (see fig. 1 for map of region). One ancient site in Iraq (Khirbet ed-Diniyeh) has also been included in the discussion because of its political relationship with Mari during part of the time period under investigation. Furthermore it
Fig. 1: Map of Syria showing Middle Bronze Euphrates Sites
comprises an artifactual assemblage that is closely related to the other Euphrates Middle Bronze Age sites in Syria.

The section begins with a summary of the architecture and extent of Middle Bronze occupation at site of Tell Hadidi, situated in the “Big Bend” region of the Euphrates Valley, followed by descriptions of other Middle Bronze Age sites in the Big Bend and the Mari region. The information in this chapter is intended to provide some background about the nature and sequence of occupation from which the Middle Bronze Age pottery, involved in the subsequent chronological study, is derived.

Tell Hadidi

Tell Hadidi was first excavated in 1973-74 by a Dutch team under the leadership of H. Franken of Leiden University. Excavations were resumed in 1974 by an American team under the direction of Rudolph Dornemann of the Milwaukee Public Museum. There are no published reports of the excavations of the former team, with the exception of a few notes regarding the ceramic inventory (van As 1984: 131-59), and stray remarks by Dornemann about the Dutch team’s previous soundings (Dornemann 1981: 46, n. 2). From these reports, it is apparent that the Dutch never penetrated into layers pre-dating the Late Bronze Age occupation of the site. The American team, on the other hand, investigated several areas containing Middle Bronze occupation. Although there is no final report of the Tell Hadidi excavations, there are preliminary reports and partial presentations of the stratigraphy and artifacts. In addition, the entire corpus of Middle Bronze pottery from Area F, hitherto unpublished, was made available for the purposes of this study (see chapter III). The Area F
pottery supplements the information provided by the published material and permits additional statements about Hadidi's relative date and inter-site relationships.

Tell Hadidi, which consists of a high and a low tell, is situated on a low terrace overlooking the west bank of the Euphrates River in the northern part of the "Big Bend." Like other sites in this area, it was affected by the construction of the Tabqa Dam, to the extent that, when the excavators conducted their last seasons of salvage work at the site, the flood waters of the artificial Lake Assad had already encroached into the lower excavation soundings (Dornemann 1979: 144). Today, all or most of the site is submerged under water.

The ancient name of Hadidi is probably Azu, a name found on administrative clay tablets discovered in the Late Bronze Age "Tablet House" of Area H at Tell Hadidi (Dornemann 1979: 145). The name Azu also appears in the archives of Palace G at Ebla, indicating that the site was known by this name as early as the mid-third millennium B.C. (Astour 1992: 46 n. 276).

The formation of Hadidi's high tell was the result of major occupations during all phases of the Bronze Age, while the lower tell was occupied during parts of the Early Bronze Age and the Late Bronze Age only. In the Middle Bronze Age, occupation at the site was limited to the upper tell and covered an area of about 21 ha (Dornemann 1982: 221). Excavations in several soundings on the high tell have exposed a well-fortified Middle Bronze Age settlement, with many phases of occupation and re-buildings.

The most important work was done in Area B, situated on the northern edge of the high tell. Here the excavators found several layers of occupation from the Middle Bronze Age, up to 1.1 m in depth, represented by a sequence of small rooms adjacent to a large wall
on the northern side (Dornemann 1979: 132 and fig. 25). The rooms were small, and contained a number of ovens, kilns and bins, suggesting that the area was used for either industrial or domestic purposes (Dornemann 1978: 24). The walls consisted of stone foundations, approximately 35-50 cm deep, that were overlaid with a mudbrick superstructure. The floors within the walls of the rooms were set at the level of the base of the walls (Dornemann 1979: 132). Several of the rooms were paved with stone (Dornemann 1979: 132). Apparently, alterations to these rooms were frequent, taking the form of shifts in the position of doors and walls and the raising of new floors, while the basic plan of the rooms was retained (Dornemann 1985: 55).

Large groups of pottery were found in all phases of Middle Bronze occupation in Area B. The pottery illustrated in Dornemann's 1979 report is derived from the series of stone pavements within the rooms of Area B described above, of which a phase is shown in plan (Dornemann 1979: fig. 25, and for pottery, figs. 20-23). The pottery itself has been divided into early, intermediate and late phases, based on the stratigraphy of these floors (Dornemann 1979: 138). With additional clearance of Area B, further stone pavements were found underneath those just described (Dornemann 1992: fig. 1). The pottery from these floors is illustrated in Dornemann's most recent report (Dornemann 1992: figs. 3-14). Finally, the earliest Middle Bronze occupation consisted of clay floors and platforms in association with the lowest Middle Bronze stone wall foundations (Dornemann 1992: fig. 2). The pottery found on these floors is also illustrated in Dornemann's latest report (Dornemann 1992: figs. 15-20). The general impression is of continuous occupation in Area B during the Middle Bronze Age with a slow but steady development in the pottery tradition.
The large wall on the northern side of the rooms found in Area B was thought to be part of the defensive system of the Middle Bronze settlement on the high tell. The wall was 3 m thick (Dornemann 1979: 132) and consisted of a heavy stone foundation, capped by a superstructure of mudbrick (Dornemann 1978: 24). It was extended in width during its lifetime by 1.25 m (Dornemann 1979: 141). Connected with the wall was a tapering pebble layer on the outside of the wall, which ran down the northern slope of the tell until it reached a 4.25 m-wide ditch, which the excavators dug to a depth of 1.75 m before hitting virgin gravel (Dornemann 1979: 141). In its final stage, the ditch was faced on the inside with large, roughly shaped stones, serving as a kind of revetment wall (Dornemann 1978: 24). This defensive system of ditches and walls was retained during the Late Bronze Age occupation at the site, albeit with major changes. A new ditch was cut and a new revetment wall of cyclopean masonry was erected on its inner edge (Dornemann 1979: 141). Furthermore, the fortification wall at the top of the high tell was re-built and expanded, thus encompassing a greater area than the previous one (Dornemann 1985: 56).

Further remains of the Middle Bronze city were found in other areas of the site. On the west side of the high tell, in Area A, a 17.5-m length of a Middle Bronze wall was found preserved up to 4 m in thickness (Dornemann 1979: fig. 29). Although the thickness of the wall suggests that it was related to the city's defences, this has not been confirmed. The fact that the wall possessed a level floor to the west and a white clay plastered western face argues against such an interpretation (Dornemann 1979: 141). Within the other areas, the city wall and associated defences were traced successfully. In area G the excavators encountered a 7-m width of stones which was thought to be the foundations of a tower (Dornemann 1979:...
141) built in connection with the city's defences. In Area P, the city-wall extended to the south, possibly forming one side of a city-gate. Unfortunately, the presence of this feature could not be confirmed since the rising waters of the lake submerged this excavation area before further investigations could be pursued (Dornemann 1979: 141 and 144).

In Area P, just before the area was submerged by water, excavations also revealed the corner of a room, with large jars in place and smaller vessels alongside them (Dornemann 1979: 144 and fig. 30). The pottery, shown only in the photograph (fig. 30), compares favourably with the Middle Bronze pottery from Area B and is probably contemporary with it.

The last Middle Bronze area of note is Area F, initially dug by the Dutch team and explored further by the American team. The pottery from this area forms the basis of typological and chronological discussions presented in the following chapters of this study; consequently, a general discussion of excavations and stratigraphy will appear along with the pottery in the following chapter.

The Middle Bronze Age occupation at Tell Hadidi may be summarized as a settlement that was densely populated and surrounded by a sophisticated system of defences, which incorporated a city-wall, towers, gates and a sloping glacis with a revetment wall. Occupation on the high tell spanned much of the Middle Bronze Age. Unfortunately, information about the earliest Middle Bronze levels, gleaned only from limited soundings in Areas F and B, is not sufficient to confirm the size of the site at the onset of the period, or to clarify in which phase the city's fortifications originated.
el-Qitar

The site of el-Qitar was excavated by an Australian team from the University of Melbourne between 1982 and 1985. The site is situated on a "mountain" on the west bank of the Euphrates River about 60 km south of the ancient site of Carchemish. El-Qitar lies at the northern end of the "Big Bend" of the Euphrates River and, today, stands at the head of Lake Assad.

The "mountain" upon which the ancient settlement of el-Qitar is situated is about 6 ha in size and rises 76 m above the flood plain of the Euphrates River (Culican and McClellan 1983-84: 31 and fig. 1 for overall plan). The northern half of the mountain is a jagged rocky ridge, practically insurmountable except from the south, where the mountain broadens out to a gently-sloped summit. It was here (Area Y) that most of the ancient remains, which were found directly beneath the surface, were encountered. The other notable feature is the spur-like area to the east of the summit, where steep northern and eastern sides jut out into the river (Culican and McClellan 1983-84: 32-33). One of the main gates of the settlement was encountered in this area (Area X).

Over the course of their investigations at el-Qitar, the excavators determined that the ancient architectural remains found immediately below the surface dated to the Late Bronze Age (McClellan 1984-85: 39; 16th-14th centuries B.C.). This conclusion was based principally on el-Qitar's pottery, which compared favourably with Late Bronze Age pottery from other settlements in Syria, especially those in the immediate vicinity (McClellan 1984-85: 51-53). A Late Bronze date was also confirmed by other artifacts (McClellan 1984-85: 53-59), especially the discovery of Mitannian cylinder seals, which were thought to date

While the majority of excavations focused on Late Bronze Age remains, a few smaller probes on the site confirmed the presence of earlier material dated to the Middle Bronze Age. In particular, a step trench sunk in Area Y in squares F/H 38 between a LB structure known as the “Orthostat Building” and the main outer defensive wall on the western side, revealed a series of layers containing pottery that was typologically earlier than the pottery found in the “Orthostat Building” and among the other Late Bronze structures (McClellan 1986: 94 and fig. 5 for section of step-trench in Area Y; see also figs. 7-9 for pottery typology). The pottery lay in layers of debris that had accumulated between the outer defensive wall W741 and a series of inner terrace walls (W865, and W866). This indicated that the fortification system of the site had its origins in an earlier period, one which was contemporary with the use of the typologically earlier pottery. The pottery from these layers of debris was thought to compare favourably with the Middle Bronze pottery from Tell Hadidi, particularly from its later Middle Bronze layers, as well as Halawa, Area Q, and Mardikh IIIB (McClellan 1986: 100-05).

In addition to the presence of a defensive wall, a sloping glacis, found in the southwestern corner of Area Y and constructed of chipped limestone alternating with dark layers of stony fill and fine dark ashy soil, lay under some of the Late Bronze structures found
below the surface (McClellan 1986: 89). There may also have been a wide and deep ditch near the bottom of the glacis, judging by magnetometer readings in this area (McClellan 1986: 90). The evidence suggests that el-Qitar was a fortified settlement during the Middle Bronze Age, equipped with a defensive wall, glacis, and, possibly, a man-made dry moat or fosse (McClellan 1986: 90). Since little else was reported for the earlier levels, one cannot comment further on other characteristics (i.e. size, domestic architecture) of the Middle Bronze settlement at this time.

**Tell es-Sweyhat**

Published reports contain the results of three seasons of excavations at the site of Tell es-Sweyhat, taking place from 1973 to 1975. The work was supervised by T.A. Holland and sponsored by the Ashmolean Museum of Oxford. Its exploration was part of the effort to investigate ancient sites before the completion of the Tabqa Dam and the formation of Lake Assad in the "Big Bend" region. Since 1989, excavations under the auspices of the Oriental Institute of the University of Chicago have resumed at the site; however, the results of these recent investigations have only been published in preliminary form, and include no additional information about the Middle Bronze Age occupation at the site (Holland 1993-94: 275-85; 1994: 139-42).

Tell es-Sweyhat is located approximately 3 km from the east bank of the Euphrates River. Its closest neighbour, Tell Hadidi, lies to the west on the opposite side of the river. The site has a central mound, about 15 m high, covering an area of about 300 m x 250 m. It is surrounded by a lower tell enclosed by an artificial earth fortification, roughly rectangular
in shape, that encompasses an area of 700 m x 600 m (Holland 1976: 36 and fig. 17). Based on the excavations and evidence from the surface, we know that the site was occupied during the Early and Middle Bronze Ages, as well as the Hellenistic, Roman and Islamic periods. It is the early material from the Middle Bronze Age that is of relevance to the current study.

Pottery and other artifacts dating to the Middle Bronze Age were found in Areas V, IX and X on the central mound (see Holland 1976: fig. 1 for location of these areas on the tell). Area V was a step trench sited on the steepest northern slope of the mound, extending from its summit to the lower northern terrace. It was excavated for the purposes of obtaining a complete historical sequence (Holland 1976: 62). Although no details of the architecture or periods discovered in this trench have been published, drawings of pottery from this area, which are illustrated in Holland’s article on decorated pottery from Sweyhat, bear unmistakable similarities to pottery found in Middle Bronze contexts at Tell Hadidi (Holland 1977b: fig. 2: 1-4) indicating that some Middle Bronze occupation was exposed in this area.

Regarding Areas IX and X on the western slope of the mound, it was reported that phases of early second-millennium B.C. architecture were uncovered immediately below the topsoil, although like Area V, these areas were not illustrated nor described in detail (Holland 1976: 62-63).

Holland’s date of the first half of the second millennium B.C. for phases A-F of Area IIA (Holland 1976: 48) is highly suspect. The area, consisting of a sequence of mudbrick walls and associated floors, contains pottery that cannot be paralleled with Middle Bronze material from other areas on the site, nor from other Middle Bronze Age sites in the vicinity. Similarities between the cup forms of phase C (Holland 1976: fig. 4.25) and EBI-II pottery
found elsewhere (Curvers 1991: pl. 4: 6114 = Hammam VI; Dornemann 1988: fig. 4: 37), as well as incised bodysherds from Phase F (Holland 1976: fig. 5:42), which compare favourably with EBIII-IV material in the region (Orthmann 1989: Abb. 41: 9-10), suggest that the occupational sequence of Trench II dates to the third millennium B.C., not the second millennium, as is argued in the report. This date correction for the Sweyhat Area II pottery finds support among at least one other scholar (Curvers 1991: 25-26). According to Holland, Area I, located on the southwest lower terrace, revealed a Bronze Age sequence similar to Phases A-F in Area II (Holland 1976: 38). Consequently, the material from this sequence, which was not illustrated, probably also dates to the third millennium B.C. (contra Holland 1976: 38).

To conclude, there was some Middle Bronze occupation at Tell es-Sweyhat. However, the nature and the extent of that occupation is still poorly understood, since little of the Middle Bronze Age findings have been published. While only a few examples of Middle Bronze pottery are available at the moment, it is hoped that the most recent excavations at the site will expand the artifactual assemblage of the early second millennium substantially.

Tell Mumbaqat/Munbaqa

Tell Munbaqa (referred to as Mumbaqat in the early publications) is situated on the left bank of the Euphrates River in the “Big Bend” region, approximately 100 km north of Meskene/Emar and in the general vicinity of the sites Tell Hadidi (which is approximately 5 km to the north) and Habuba Kabira (approximately 10 km to the south). Excavations
at the site of Munbaqa were carried out under the auspices of the Deutschen Orient-
Gesellschaft and the Deutschen Forschungsgemeinschaft between 1969 and 1993. During these years, E. Heinrich (1969-1972), W. Orthmann (1973-1974), and D. Machule (1978-1993) served as project directors, and were the primary authors of the annual progress reports of the excavations which appeared in volumes of Mitteilungen der Deutschen-Orient Gesellschaft.¹

Archaeological findings to date show that the site was originally founded in the Early Bronze Age. During that time, the site was fairly limited in size, restricted only to the northwestern section of a natural high ridge over the Euphrates, known as the Kuppe (de Feyter 1989: 237). The site continued to be occupied through the Middle Bronze Age. At the onset of the Late Bronze Age, it was greatly expanded to the south, southwest and east, to include extensive residential quarters (known as the Innenstadt, “Ibrahim’s Garden” and the Aussenstadt), fortified inner and outer city walls and monumental gateways.

Included among the findings from the Late Bronze Age occupation at Munbaqa were some 88 cuneiform tablets (Mayer 1993: 103-106). These tablets, which are dated to the middle of the second millennium B.C. (Mayer 1990: 45-67), identify the site of Munbaqa in Late Bronze Age times as ancient Ekalte (Machule 1993-94: 241). In the Mari period, it is possible that the name Ekalte corresponds with the place-name Yakaltum, which is mentioned in several of the Mari letters in connection with a tribal group known as the Rabbeans (Wu 1992: no. 51). This equation, however, has yet to be confirmed.
Building remains dating to the Middle Bronze Age were encountered in the area of the Kuppe on the highest point of the mound, in and around two large buildings called Steinbau 1 (Heinrich et al. 1974: Beilage 2) and Steinbau 3 (Machule et al. 1991: Abb. 1). Steinbau 1 was one of the first major buildings to be excavated since its stonework had been visible on the surface (Heinrich et al. 1974: 11). The building represents an architectural form called a "long-roomed temple" or Antentempel, known from other sites both in Syria and Palestine and dating between the Early and Late Bronze Ages. In the case of Steinbau 1, its latest monumental stonework was thought to correspond roughly with the Late Bronze occupation at the site, while earlier levels of the temple, of which only fragmentary remnants were preserved, were thought to date to the Middle and Early Bronze Ages.

The internal stratigraphy of Steinbau 1 consisted of eight recognizable levels, divided into sub-phases that represented local rebuildings, re-floorings and levelling fill (Heinrich et al. 1974: Abb. 30, provides a section of the stratigraphic sequence). Levels H4.1-H2 represented the latest building and occupation of Steinbau 1, whose stone walls were still largely preserved (Levels H1 and H0 correspond with the abandonment of the temple and surface layer). During its latest use, the building comprised stone walls 2 to 2.7 m thick. The north and south walls projected beyond the east entrance wall, forming antae. A partition wall divided the interior space into a long cella and short antechamber. Lion orthostats flanked the passageway between these two rooms (Heinrich et al. 1970: 76).
Between levels H4.1 and H7, a series of plastered floors and alternating gravel layers were encountered, unfortunately without any associated walls (Heinrich et al. 1974: 14). The foundation trenches and the stonework of the later walls entirely destroyed the remnants of the walls from this earlier period (Heinrich et al. 1974: 16). Nonetheless, the building had some special significance in these earlier levels, as indicated by the fact that the floors were continually renovated and carefully maintained. The special character of the building was also suggested by the small finds discovered within the building. For example, the excavators uncovered a hoard of precious objects, which had been stored in a vessel that had been sunk into a clay floor (H6) of the building (Heinrich et al. 1974: 20). The vessels and its contents, designated as Hortfund MBQ 26/35-26+, contained several bronze needles, daggers, lance-heads, small gold and silver pieces of jewellery, and well as fragments of sculpted eyes of lapis lazuli and limestone (Heinrich et al. 1974: 34, and Abb. 48-61). A similar pot of precious objects, MBQ 25/35-26+, was found in a niche set into a clay bench (Heinrich et al. 1974: 22) and associated with a slightly higher floor (H5). The globular vessel contained fragments of bronze ornaments and toggle pins, and part of a fenestrated axe, while two daggers and a spear-head had been placed immediately on top of the vessel (Heinrich et al. 1974: 45, and Abb. 62). Finally, the existence within the same level of the building (H5) of a free-standing, plastered brick podium, benches made of stone and brick and covered with clay plaster, as well as an inventory consisting of incense stands and the skull and horns of two bovines suggested the building's sacred, as opposed to profane, character during this period (Heinrich et al. 1974: 21-22, and see Abb. 35, for plan of level H5). The end of this sequence of floors
was marked by a fire, which sealed the floor with debris (H4.1) upon which the latest building was erected.

The earliest layers of the "temple" comprising H8-H7 consisted of a plastered floor (into which pottery vessels had been sunk, and were found in situ, see Heinrich et al. 1974:18) and associated walls of white-plastered bricks, of which only the stumps were found.

The two Hortfundenden described above appeared to have heavily influenced the dating of the temple phases of Steinbau 1. The pot that contained Hortfund 1, MBQ 26/35-26, was thought to compare favourably with vessels from Hama J2 (Fugmann 1958: 77, Abb. 98: 3B 685) as well as Early Bronze pottery from other sites, and was thus dated to the Ur III period, or the end of the Early Bronze Age (Heinrich et al. 1974: 34). Consequently, the floor phase associated with this vessel (H6) was also dated to that period. The jar of Hortfund 2, MBQ 25/35 (associated with phase H5), was thought to parallel vessels found at Hama in levels H5-H2, which have been dated to the Middle Bronze Age (Fugmann 1956: 278; 1900-1600 B.C.). This was further supported by the fenestrated axe, found within the jar, which is commonly associated with the beginning of the Middle Bronze Age (Heinrich et al. 1974: 45). The pottery sherds found on the same floor as Hortfund 2, and the fill above, (H5-H4.1), were also thought to parallel Hama H5-H2 vessels (Heinrich et al. 1974: p. 33), further supporting a Middle Bronze date for these strata.

In summary, Heinrich dated the Steinbau 1 sequence as follows:

H2-H4: Late Bronze
H4.1-H5: Middle Bronze (= Hama H5-H2)
H5-H6: End of Early Bronze (=Hama J)
H6-H7: Early Bronze (=Hama J and earlier)

Based on my pottery sequence for the Middle Bronze Age, I have reservations about this dating scheme, as will be discussed in the study of Munbaqa's internal chronology in chapter V. Through pottery analogies with other Middle Bronze assemblages, I will show that the early part of the Middle Bronze period is represented by levels H5-H6, while H4.1-H5 belong either to the second half of the Middle Bronze or to the Late Bronze tradition. Levels H6-H7 are best correlated with Hama J, and should be dated to the end of the Early Bronze Age.

Beginning in 1973, Orthmann explored other areas in the vicinity of Steinbau 1, with the aim of linking the stratigraphic sequence observed within the temple with the associated architecture around it. One of his operations took place south of Steinbau 1 in quadrant 2733 I and II. Here, three phases were identified. While the top or latest phase comprised only a layer of debris, level 2 consisted of three surfaces associated with a fairly large building with stone walls and a street running beside it (Orthmann and Kühne 1974: 71, Abb. 14). The pottery from level 2 (Orthmann and Kühne 1974: Aobs. 20-22) was thought to compare favourably with the pottery from the latest levels at Habuba Kabira, which have been dated to the Middle Bronze Age (Orthmann and Kühne 1974: 77).

One of the other areas investigated by Orthmann in 1973 was quadrant 4931, in the northeastern sector of the tell. By the end of the campaign, five levels had been investigated there. Levels 1-3 represented Late Antiquity/Early Byzantine occupation, while levels 4 and 5 were dated to the second millennium B.C. (Orthmann and Kühne 1974: 79). In both of the earlier levels, the area consisted of a city wall and city gate.
These structures were founded in level 5, the earlier of the two levels (Orthmann and Kühne 1974: 84). Level 5 was divided into 5a and 5b on the basis of the discovery of two floors situated on the battlements of the city wall. The upper walkway 5a consisted of a plastered clay layer, while the earlier surface 5b was found under a layer of earth and pebbles, in the form of a clay-plastered surface laid over perpendicular-set bricks (Orthmann and Kühne 1974: 88; Abb. 29). The pottery found immediately above the earlier surface 5b was illustrated (Orthmann and Kühne 1974: Abbs. 40-41). In addition, a painted sherd of a so-called “Milk Bowl,” which was reported to have come from the ashy debris below level 4, was also illustrated (Orthmann and Kühne 1974: 93; Abb. 39). Since this Cypriote sherd is commonly associated with the Late Bronze Age (Amiran 1970: 182), then the level 5 pottery should date to the Late Bronze Age or earlier. The excavators suggest that phase 5b may represent the beginning of the Late Bronze, while phase 4 marks the end of that period (Orthmann and Kühne 1974: 94). They also note that the pottery of phase 5b has similarities with level 2 of quadrant 2733 and that both are contemporary with the latest levels at Habuba Kabira (Orthmann and Kühne 1974: 94). A further assessment of the chronological position of this pottery will be presented in Chapter V.

The continuation of excavations under Machule into the 1980s resulted, among other things, in the exposure of a third long-roomed temple known as Steinbau 3, located north of Steinbau 1 on the Kuppe and oriented on the same axis (Machule et al. 1991: Abb. 1). Steinbau 3 is thought to date exclusively to the Late Bronze Age, since the pottery found within it dates no earlier than that time (Machule et al. 1993: 72). However,
it was built immediately over and beside an earlier mudbrick structure known as the "Mudbrick Building," which is thought to date to the Middle Bronze Age (Machule et al. 1992: 14). The excavators equate this building with levels H6-H5, Heinrich's phase designation for the series of occupation layers within Steinbau 1 (Machule et al. 1992: 14). Significantly, their equation of levels H6-H5 with the Middle Bronze implies that they too had revised Heinrich's earlier scheme, which had equated levels H6-H5 with the Early Bronze Age (Heinrich et al. 1974: 34 and see pp. 30-31 above).

The "Mudbrick Building" contained a series of large, interconnected rooms. Some of the rooms were furnished with podia (Rooms 10, 15, 29; Machule et al. 1992: 15; 1993: 75), plastered mudbrick benches (Room 10; Machule et al. 1992: 15) and stepped niches (Room 29; Machule et al. 1992: 16, Abb. 2), suggesting that the building had a cultic function (Machule 1993-94: 242). Mudbrick debris found under the earliest floors of Rooms 15, 6 and 26 contained a large quantity of sherds dated to the Middle Bronze Age, suggesting that the Mudbrick Building was built over the remains of an even earlier Middle Bronze building (Machule et al. 1993: 76).

A mudbrick city wall was first found in 29/40 and 31/39 (Machule et al. 1992: 14) and was consequently located immediately on the north side of the Mudbrick Building in quadrant 28-29/40. It was also thought to date to the Middle Bronze Age and presumably would have encircled all of the Kuppe at this time (Machule et al. 1992: 76, and see Abb. 3).

One final area of supposed Middle Bronze occupation was located to the east of Steinbau 3 and designated House AD. The ground plan of the building was difficult to
articulate because of disturbances by the Late Bronze Age constructions above, as well as the foundations of the dig house (Machule et al. 1993: 78), but it appears to have consisted of a series of interconnected rooms with mudbrick walls. The excavators have found storage jars, a bronze funnel (Machule et al. 1993: Abb. 5), bone needles, stone weights, animal bones and fragments of sculpted stone eyes (Machule et al. 1993: Abb. 6) within the rooms of this building, leading them to interpret House AD as a public works building whose function had some connection with the contemporary “Mudbrick Building” to the west (Machule et al. 1993: 77-78). The pottery from House AD was described and photographed (Machule et al. 1993: 81, Abb. 7), and was considered to be contemporary with pottery from other Syrian Middle Bronze sites, notably Tell Hadidi Area B, Halawa quadrant Q level 2, and Hamman et-Turkmann VII (Machule et al. 1993: 81).

Given all of the evidence to date, it would appear that the Middle Bronze occupation of Tell Munbaqa was restricted to the summit of the Kuppe of the site, in and around the areas of Steinbau 1 and Steinbau 3. Much of the architecture appears to be related to religious activities. In addition, the existence of a city wall from this period suggests that the Middle Bronze settlement was defended.

Tell Habuba Kabira

Tell Habuba Kabira was excavated between 1969 and 1973 by a German team under the sponsorship of the Deutschen Orient-Gesellschaft. The site is situated on the west bank of the Euphrates River within the “Big Bend” region, about five km north of Tell Halawa on
the opposite side of the river, and about ten km south of Mumbaqat, another site investigated by the DOG during their seasons of fieldwork at Habuba.

The tell of Habuba Kabira rises about 14 m above the flood plain of the Euphrates River, situated immediately to the east of it (Heinrich et al. 1969: 41). The tell measures about 230 m across, and is characterized by a steep fall on the eastern and northern sides. The west and south slopes are more gentle (Heusch 1977: 159). The tell is distinct from the low rise of land to the south of it, named Habuba Kabira South. This area is connected with Tell Qannas, where excavations have exposed remains of an Uruk period settlement just below the surface. This site has received a great deal of attention since its architectural and artifactual remains have strong links to Uruk period sites in southern Mesopotamia (Strommenger 1980: 32-44). In contrast to Habuba Kabira South, the Uruk period levels at Tell Habuba Kabira were encountered under a series of layers dating to the Early and Middle Bronze Ages.

Excavations on the tell were restricted to the southeastern side since the rest of the mound was covered by a modern cemetery (Strommenger 1980: 69). On the southeastern side, approximately 2000 m² were excavated over the course of four field seasons, resulting in the exposure of 20 levels of occupation (Heusch 1977: 159).

Preliminary reports of the excavations at Tell Habuba Kabira were published in volumes of *Mitteilungen der Deutschen Orient Gesellschaft* (Heinrich et al. 1969, 1970, 1971 and 1973). These reports provide fine stratigraphic details of the levels uncovered during each season, but there was no systematic attempt to arrange all of the levels into a coherent sequence. At the end of the operations, however, each of the occupation levels was re-
numbered, with the lowest levels representing the earliest occupation encountered, while the highest levels represented the latest phases of occupation. Heusch’s treatment of the architectural sequence of the site (Heusch 1977) makes use of this new numbering system, and it will be the one used to describe the stratigraphy of the tell rather than chronological systems described in the annual reports.

Occupation dating to the Middle Bronze Age was represented by levels 17-20. They were the latest ancient levels at the site. Unfortunately, because the levels were near the surface, many of the structures were badly eroded or cut by recent pits and graves (Heusch 1977: 176). What could be discerned on the south-eastern slope were the remains of brick walls belonging to a fairly large rectangular structure that was used in the Middle Bronze Age but had been originally planned and constructed in the Early Bronze Age (see Heusch 1977: 177, for a plan of levels 17-20). That the people of the Middle Bronze Age had continued to use this plan, building their walls over remnants of the earlier walls, suggests that the MB occupation took place only a short time after the demise of the EB settlement (Heinrich et al. 1969: 48).

South of the large building, the excavators encountered an open area where the remains of two circular basins were uncovered. The basin-like installations are reminiscent of the “silos” discovered in level H5 at Hama (Fugmann 1958: 86-96) and, more recently, at Tell Bi’a (Strommenger 1991: 16). Their function is unclear, but they may have been used as storage bins for grain or some other perishable food material. In the vicinity of the silos was an area consisting of heavy deposits of ash and burned debris. The pottery, which was illustrated in the 1971 excavation report, derives chiefly from these burned layers (Heinrich
et al. 1971: 18 and figs. 9-11). In addition, pottery that was excavated in the first season in the area of the large building was also associated with the latest levels and dated to the Middle Bronze Age (Heinrich et al. 1969: fig. 18).

Few other remarks were made about the MB levels at the site, except that most of the earlier Bronze Age structures were no longer in use. The well, for example, which was situated on a terrace south of the main building, had ceased to function. It had been filled with debris and covered with limestone (Heusch 1977: 176). In addition, the earlier fortification system, which included a wall that had encircled the upper part of the tell in the earlier periods, was no longer in use. During the excavations, no Middle Bronze fortifications were uncovered, so it would appear that the settlement was undefended at that time.

Halawa

Halawa was excavated over the course of nine seasons, between 1977 and 1986, by a German team under the direction of Winfried Orthmann. The results of the excavations at the site were published in a two-volume report, which divided the work into the early (volume 1: 1977-1979; Orthmann 1981) and the later seasons (volume 2: 1980-1986; Orthmann 1989).

Halawa is located on the eastern bank of the Euphrates River, approximately 20 km south of Tell Hadidi. Like Tell Hadidi, Halawa is situated in the part of the “Big Bend” region that was subjected to intensive archaeological investigations prior to construction of the Tabqa Dam.
Halawa is named after the modern settlement of the same name, located along the riverbank immediately to the north of it (Orthmann 1981: 3). The ancient site was discovered on two natural hills, Tell A and Tell B, which rise above the floodplain of the river. They are separated from one another by a large and deeply cut wadi running from the east into the Euphrates River (Orthmann 1981: Taf. 21-22). While archaeological material from only the Early Bronze Age (third millennium B.C.) was encountered in Tell B, Tell A consisted of occupation that began with the last part of the Early Bronze Age and continued into the Middle Bronze Age.

The excavators divided the area of Tell A (300 m x 400 m) into smaller quadrants to facilitate recording and laying out their trenches. During the course of their fieldwork they were able to excavate in several of the quadrants. Their main operations were divided into the following projects: 1) delineation of the city-wall; 2) excavations of a city residential district in Quadrant Q, which lies in the northern part of the tell; 3) excavations of the temple district in Quadrant L, to the south of Quadrant Q; 4) excavations in Quadrant T; 5) an investigation of the graves within and outside the ancient settlement. Through these operations they were able to acquire a general understanding of both the late Early Bronze and the Middle Bronze Age occupations at this site.

Most of the information about the Middle Bronze Age occupation at Halawa was derived from Quadrants Q and Q/L, the residential sector of the city. Here two main levels of the Middle Bronze Age were identified. They were designated levels 1 and 2, the earlier level 2 being divided into two sub-phases: 2c (earlier) and 2b (later).
Excavations in Quadrants Q and Q/L, conducted over an area of 1000 m², revealed that level 2 comprised a well laid-out residential quarter. Basically, the arrangement consisted of a number of connecting streets that ran between blocks of adjoining rectangular houses (Orthmann 1981: Taf. 25, 76-77; 1989: Abb. 6).

The houses of the residential sector were divided into two types based on their total areas: type A (25-30 m²) and type B (36-40 m²) (Orthmann 1981: 19; 1989: 26). Despite their variations in size, however, the material remains found within the houses were undifferentiated, making it impossible to detect disparities in social status or wealth among the households.

All of the level 2 houses in this sector possessed similar architectural arrangements. They each consisted of two to five rooms, the largest of which served as a work area where food was processed and prepared. This was reflected by the number of tannurs, hearths, and sunken jars that were found there (Orthmann 1981: 20; 1989: 26). The largest room was usually the first to be accessed from the street, and thus served also as a kind of entrance hall or courtyard. One cannot be certain whether or not these rooms were roofed since little in the way of timber roof remains (Orthmann 1981: 20), post-holes or other roof supports were found (Orthmann 1989: 26). At the same time, however, no system of run-off or gutters was found in the rooms, which would have been expected if they had been open to the elements (Orthmann 1981: 20; 1989: 26). Nonetheless, the floors of the rooms were usually clay-plastered and this would have prevented moisture from settling within (Orthmann 1989: 26). The excavators generally assume that these rooms were open to the sky, while the living rooms behind were roofed (Orthmann 1989: 26).
The houses were all similarly built. The walls were set on foundations consisting of limestone blocks, which formed a shell around a packing of smaller stones set in between. Above these foundations, which were usually 3 or 4 courses high, the walls were covered with a thin layer of clay and then constructed with unbaked brick for the remainder of their courses (Orthmann 1989: 20-21). The floors within the rooms of the houses were often covered with a thick clay plaster or, in a few cases, a well laid layer of limestone plaster (Orthmann 1989: 21). In general, the outer walls of the houses were about 0.7 m thick, while the inner walls were approximately 0.5 m thick.

The houses were arranged in blocks, with each unit sharing an outer wall with the unit adjacent to it. Running between the blocks of houses was a number of streets, which were narrow (1-2 m) but well-paved, consisting of an underpinning of gravel, over which layer of stamped clay mixed with small pebbles and pot sherds was set (Orthmann 1989: 22). Thick layers of ashy debris had accumulated over the street surfaces, possibly the result of people throwing trash from their households. In addition, fire installations and tannurs were found in some of the streets, and this may also have contributed to the build-up of debris (Orthmann 1989: 22).

The level 2 buildings of Quadrants Q and Q/L were constructed above the rubble of level 3 (dated to the end of the Early Bronze Age), which had been destroyed by fire. In several observable cases, the ruined walls of the houses of level 3 were levelled to a uniform height and then surrounded by a fill of gravel and debris, creating a level surface upon which to build the level 2 buildings. In other cases, the buildings of level 2 were built directly on the older building remains, with little in the way of preparation or the digging of foundation
trenches. Such construction may account for the uneven levels at which the excavators encountered the level 2 architecture (Orthmann 1989: 23).

Some of the level 2 buildings actually extended over and beyond the old Early Bronze city wall. In fact, the line of Street 1 of level 2 followed almost exactly the line of the northwestern part of the city wall that existed during level 3 (Orthmann 1989: 22). The area outside the old city wall was raised up by layers of rubble in order to accommodate the construction of level 2 houses. There were no traces anywhere in Quadrant Q or Q/L of a Middle Bronze Age city wall. The general impression is that Halawa was an open, un-walled city during the Middle Bronze Age, protected only by virtue of its location on a rise of land (and partly surrounded by the remains of a level 3 glacis), and bordered on one side by the Euphrates River (Orthmann 1989: 22).

As was indicated above, level 2 was divided into two architectural sub-phases designated 2c and 2b. There was no uniform destruction horizon between 2c and 2b to warrant a separate phase designation (Orthmann 1981: 23). Rather, it would appear that the buildings of level 2c suffered from deterioration or destruction caused by local fires, weathering, and the accumulation of debris in the surrounding streets (Orthmann 1981: 24). The floors of level 2b were set above the older ones and the mudbrick superstructures of the houses repaired, while the earlier stonework of the walls' foundations appears to have been retained (Orthmann 1981: Taf. 76-77. The same stonework of the houses can be observed in both 2c and 2b). There were only a few changes in the layout of the houses of any note; they consisted mainly of the expansion of some of the rooms by the relocation of walls, or by
the addition of rooms with the construction of new inner partitions (Orthmann 1981: 24). In summary, there appears to have been a general continuity between phases 2c and 2b.

The layout and size of the buildings of level 2, as well as the nature of the installations and artifacts found within these buildings, suggests that the area was a residential district, each house providing a residence for a family. There was nothing in this area to suggest the presence of a wealthy class; rather they appear to be the homes of a group of people belonging to the same socio-economic class.

The failure to find an administrative centre at the site, such as a temple or a palace, was considered rather unusual. This was especially so given the ordered layout of the residential quarter, which appeared to have been the result of careful urban planning and organization. Either the administrative centre of the city has not yet been uncovered or, as the excavators suggest, the city of Halawa may have been governed by another city at this time, perhaps the city of Emar (Orthmann 1989: 32).

The buildings of level 2b appeared to have been destroyed at the same time, as is indicated by the extensive and uniform evidence of conflagration observed in all of the houses. Nonetheless, it is uncertain whether this fire was the result of warfare and invasion, or whether the town quarter was destroyed by a house-fire that had burned out of control. Since the excavators did not find any human remains within the wreckage of the buildings, the latter was thought to be the case (Orthmann 1981: 23-24).

The buildings of level 1 were built above the ruins of level 2b. Although the level was also dated to the Middle Bronze Age, the architecture of this phase was completely different from that which preceded it. As opposed to a large number of small houses and streets, level
1 consisted of a small number of very large structures. House I, which was the chief focus of excavations, covered an area of 500 m², several times larger than any of the houses in the previous level (Orthmann 1981: 18). From what was preserved of House I (much of the level was disturbed by later graves and erosion), it would appear that the structure originally consisted of several rectangular rooms surrounding a large open courtyard (9 m x 9 m) situated in the centre of the building (Orthmann 1981: 14). Prior to the construction of the building, special preparations were made. A thick clay packing was set over the ruins of level 2, creating a level surface upon which to build. The foundations were laid down, and then bricky rubble was used to raise the area further. Consequently, the floor was set above this raised layer. Like the buildings of level 2, the walls of level 1 were made of limestone filled with smaller stone and then topped with a mudbrick superstructure (Orthmann 1981: 14).

The architectural layout of House I is reminiscent of buildings found at other contemporary sites. Most striking is its resemblance to the Hofhaus at Tell Bi’a, otherwise known as the “Red House” of level III, which appears to date to a relatively developed stage of the Middle Bronze Age (Strommenger 1982: 87-93). In addition, the excavators of Halawa compare the house to large houses excavated at Assur and Ur (Orthmann 1981: 18).

**Tell Bi’a (ancient Tuttul)**

Excavations at Tell Bi’a were begun in 1980 by a German team funded by the Deutschen Orient Gesellschaft, under the direction of Professor Eva Strommenger.³ The site is located on the edge of the flood-plain near the confluence of the Balikh and the Euphrates Rivers. The site is of interest because of its strategic location at the junction
of these two rivers, the fact that it is a fairly large site (600 m x 700 m), and its match to the description in documents from the Old Akkadian, Ur III and Old Babylonian periods of an important city called Tuttul. Recently, the discovery of tablets at the site of Bi’a that bear the name of Tuttul further supports the identification of the site with that ancient city (Krebennik 1993: 51-60).

**Hill E Palace.** Excavations of Middle Bronze/Old Babylonian levels were carried out in several areas of the tell, but the most significant MB area proved to be that on the south-western slope of the high and prominent Hill E, located near the centre of the site. Here the excavators found the remains of a large building, approximately 41 m x 46 m in area (Strommenger et al. 1987: 10, and Abb. 2) Based on its similarities to other palaces from the Old Babylonian period and ceramic parallels with early second millennium pottery from other sites in Syria, it was considered to date to the Middle Bronze Age.

The building in question was first named the “Red Building” (Strommenger 1984: 27), and later became known as the “Palace” or the “Late Palace” (Strommenger 1991: 11). It was constructed of unbaked red-brown bricks. Its solid foundations had been built above a prepared layer of fine clay and gravel, which had been set over the levelled walls of earlier structures (Strommenger et al. 1984: 27-29).

The walls of the Palace measured between 1.8 and 2.2 m thick (Strommenger et al. 1986: 12), and were often plastered on the insides with layers of lime or clay plaster. The floors consisted of stamped earth or, more frequently, were covered over with brick or limestone slabs, much in the tradition of other Old Babylonian palaces, notably the Palace of Zimri-Lim at Mari.
The general layout of the Palace consisted of three main courtyards, or central halls, surrounded by a complex of smaller rooms. The largest of these halls was Room 5, located in the southern part of the building. Immediately to the north was a “throne room” (Room 1) equipped with plastered benches and a podium, and to the east, a “cella” (Room 6), which was paved entirely with square limestone slabs.

The floor of Room 5 of the Palace had been set over a large rectangular chamber, 3.3 m deep (Einwag 1993: Abb. 2-3). That the chamber had been an earlier construction was suggested by the fact that it was constructed of a different type of brick material than the walls of the Palace, and that the original floor of Room 5 extended over its walls (Strommenger 1991: 12). The chamber in question actually consisted of two unconnected rooms with no discernible exits. Presumably the only access to the chamber was via the roof, which had not been preserved (Strommenger 1991: 12). Interestingly, the layout of the sunken chamber is similar to a two-roomed tomb found under the floor of the main hall of the “Shakanaku Palace” of Area A at Mari (Margueron 1984b: 197-215). Because of their similarities the two-roomed chamber at Bi’a was also thought to be the remnant of a tomb. Unfortunately, the excavators found no human remains or grave goods within the chamber, and have suggested that either the tomb was never used, or it was completely robbed shortly after it was sealed (Strommenger 1991: 13). The chamber was subsequently filled with bricky debris, bone and ash (Einwag 1993: 37).

None of the pottery from the occupation of the Palace at Tall Bi’a has been published and, thus the precise date of the Palace’s construction is difficult to determine. However, based on excavations immediately below the Palace, which have produced pottery dating to
the end of the Early Bronze Age (EBIV), and excavations in the levels of the "post-use" of the Palace, which can be firmly dated to the period of Shamshi-Adad I of Assyria, one can infer that the Palace was built around the beginning of the Middle Bronze Age. The construction of the Palace may be credited to an individual named Bahlukulim, a contemporary of Yahdun-Lim (1815 B.C.), who is known from an inscription from Mari (Dossin 1955: 1-28). The text relates that the new king of Mari, Yahdun-Lim, made an expedition up the Euphrates River and defeated a coalition of kings that included Bahlukulim, king of Tuttul (Mayer 1987:123, 149). The excavators of Bi'a generally accept that Bahlukulim was the original occupant of the Palace (Einwag 1993: 40).

"Post"-Phases of Hill E Palace. After a time, the Palace on Hill E ceased to function as an important residence and was abandoned. Only a short period of time passed, however, before it was re-occupied. During this later phase, the walls of the palace were repaired and certain structural changes were made (Strommenger 1989: 101). For example, some of the original doorways of the Palace were bricked in and new doorways were opened in other places (Strommenger 1989: 101; Strommenger et al.1986: 20). Along with these alterations, several of the rooms of the palace were divided into smaller units by the construction of partition walls. These new areas appear to have become either living quarters or work rooms (Strommenger et al. 1986: 20; Abb. 8). The northern courtyard 11, for example, was divided into a number of small rooms. In one of the rooms, 11d, a clay platform was found, into which a number of large jars had been set (Strommenger et al.1986: Abb. 10). The excavators also encountered a bread-oven, suggesting that the room served as a kitchen (Strommenger et al. 1986: 21). Similarly, the once large and impressive Hall 5 was divided
into smaller spaces by flimsy partition walls. Two ovens were installed in this room, and the floor was covered with layers of ash, gravel, bone and the bones of large animals, as well as pot sherds (Strommenger et al. 1986: 23; 1987: 13-14; 1989: 101). Finally, in Room 16 a row of tannurs was found (Strommenger et al. 1989: 14-15). Clearly, the function of the palace had changed. It did not appear to have been used as a royal residence at this time. Nonetheless, it must have continued in some important capacity, as is suggested by the approximately 60 tablets that have been found in the building, many coming from one of the northern rooms (Strommenger 1993: 11-12; Krebernik 1993: 51). Several of these tablets bear the sealings of servants of Shamshi-Adad and Yasmah-Adad of Assyria, suggesting some royal involvement with this building (Krebernik 1993: 51). The year-names on these tablets also give a precise date for the "post-phase" of the Palace, which is the time of the Assyrian king Shamshi-Adad, and his son, Yasmah-Adad (1798-1775 B.C.).

Perhaps the most unique find relating to the post-occupation of the Palace was the discovery of a mass-grave in a pit that had been dug into the floor of Hall 5, and which partially cut into the eastern room of the earlier grave chamber, mentioned above (Strommenger 1991: 13; Einwag 1993: 33). The mass-grave contained the skeletons of about 80 individuals. While some of the bodies had been laid out carefully, others appeared to have been tossed hastily and carelessly into the pit, one on top of the other (Strommenger 1991: 13). A physical anthropologist has reported that many of the individuals buried in this mass-grave had muscular physiques and partially healed wounds, suggesting that they were the bodies of soldiers rather than ordinary citizens (Strommenger 1991: 15). Unfortunately, the excavators did not find any weapons or armour with the bodies.
In the pit above the mass grave, the excavators found a layer of ashy debris containing lumps of clay impressed with cylinder seals as well as large and small fragments of tablets, most of which were badly preserved (Strommenger et al. 1989: 15; Strommenger 1991: 15). Apparently, the seal impressions are characteristic of the Old Babylonian cylinder seal style (Strommenger et al. 1989: 15), and several of the tablet fragments bear year-names that may be dated to the time of Yasmah-Adad of Assyria (Krebernik 1990: 67-87). Based on this information, the pit fill can be dated to the period of the Assyrian hegemony and thus is contemporary with the “post-phase” of the Palace. The mass-grave itself may be the violent consequences of an event related to the transfer of power at Tuttul at the beginning of Assyrian rule.

Along with the tablets and sealings, the excavators found a number of industry-related products, probably connected to the workshop activities of the building in its post-palace phases (Strommenger 1991: 15). In addition they found a fragment of Habur Ware, as well as other ceramic sherds that are thought to date to the Middle Bronze Age (Einwag 1993: 44).

Buildings of Hill E North. A great deal of information has come from a sounding on the northern slope of Hill E. Here the excavators uncovered a series of mudbrick buildings, all of which probably date to various stages of the Middle Bronze Age.

In the latest layers (levels I and II) the excavators encountered the partial remains of walls, floors and installations such as tannurs and fireplaces, together with a heavy accumulation of ash and pottery (Strommenger 1981: 28; Strommenger et al. 1982: 85-87, Abb. 9). Below these installations, a series of buildings was found, several of which were
named after the colour of bricks that were used to construct their walls: the "Red House" (level IIIa), a large rectangular building consisting of a inner, central courtyard or hall surrounded by six rooms (Strommenger et al. 1982: 87-91 and Abb. 8); the "Green House" (level IIIb), which possessed the same architectural layout as the "Red House" above it (Strommenger et al. 1984: 18-21); the "White Building" (level IV), and Buildings A, B, C, D and E (level V) (Strommenger et al. 1984: 21-26). Because the reports have produced only a few illustrations of some selected specimens, the pottery assemblages uncovered from each of these levels are difficult to assess. Based on observations by the excavators, however, one may accept the following chronological correlation: that the post-palace phase of the Palace on the southern slope of Hill E is contemporary with the buildings of level Vb from the northern slope of Hill E (Strommenger et al. 1986: 21). Thus, all of the buildings subsequent to level Vb on the northern slope of Hill E mentioned above, are dated after the Assyrian period of Shamshi-Adad.

**Hill C Temple.** Excavations conducted on Hill C, a large rise that projects out of the western side of the site, began in 1981 (Strommenger et al. 1982: 82, 93-98). The most notable building encountered near the summit of Hill C was a large structure with enormous mud-brick walls, sometimes measuring more than 6 m wide (Strommenger et al. 1982: 96). Originally, the excavators thought that the structure was a segment of the Old Babylonian city-wall, part of which had already been located on Hill K at the northern end of the site (Strommenger 1981: 30 and Abb. 3; Strommenger et al. 1982: 96), and which was approximately the same width. Based on pottery found around the foundations of the wall on Hill K, the wall was thought to date to the Old Babylonian period (Strommenger 1981:
As the excavations proceeded, however, it became clear that the large structure on Hill C was not part of the city-wall, but was in fact a single-roomed rectangular building, resembling the standard Middle Bronze "long-roomed" temple known from other sites in Syria and the Levant from this period (Strommenger et al. 1986: 33, Abb. 16, and n. 28). The temple appears to have had three consecutive building phases, shown by slight changes in the orientation and thickness of the walls (see Strommenger et al. 1989: Beilage 1, for the best plan of the temple and its phases).

Apparently, the foundations for the temple cut into older layers of domestic occupation containing pottery sherds dating to the end of the Early Bronze Age (Strommenger et al. 1986: 35). That could fix its earliest construction to around the beginning of the Middle Bronze Age. Furthermore, on the brick floor of the lowest level of the temple, the excavators found sherds that appear to date to the early part of the Middle Bronze Age (Strommenger et al. 1982: 97, Abb. 14).

A number of human graves were uncovered in the vicinity of the temple. In fact, the vertical shafts of two graves cut through the outer part of the northern wall of the temple in its earliest phase (Strommenger et al. 1984: 36-37). The pots from these graves are clearly Middle Bronze in date (Strommenger et al. 1984: Abb. 21 a-e). From the published report, it is not clear how the tops of the vertical shafts of the graves correlate stratigraphically to the phases of the temple. Two other graves are described as having been set into a courtyard-like area immediately to the north of the temple, which presumably existed while the temple was in use (Strommenger et al. 1984: 39). The precise stratigraphic relationship between the graves and the courtyard is not described in the report.
To summarize, excavations in several areas of Tell Bi’a have shown that it was a large city during the Middle Bronze Age. It was characterized by a large city wall (based on evidence from Hill K), a monumental “long-roomed” temple (Hill C), and what is presumed to be a royal palace or the residence of an important functionary (Hill E). The buildings’ strong analogies to structures from other Middle Bronze Age sites, notably Mari to the south, point to its cultural association with other important Mesopotamian polities. Cuneiform tablets discovered both at Mari and Tell Bi’a itself strongly suggest that the site should be identified as ancient Tuttul, an important city on the Euphrates River during the period of the Assyrian king Shamshi-Adad, and his successor at Mari, Zimri-Lim.

Tell Mohasan

In the 1980s, a survey of the Euphrates Valley between the modern towns of Abou Kemal and Deir ez-Zor was conducted by members of the French Expedition to Mari (Geyer and Monchambert 1987: 293). Their aim was to gain an understanding of the development of human settlement through time in this region with a consideration of the influence of natural factors such as the geological setting and climate of the Euphrates Valley, as well as the effects of political and economic developments. In this regard, the researchers were particularly interested in observing the location, quantity and complexity of settlements in the valley during times of political domination by core cities such as Mari.

In the course of their study, the surveyors mapped 88 sites, which included tells, surface scatters, cemeteries, tombs, mosques and fortresses along a 130 km stretch of the Euphrates Valley (Geyer and Monchambert 1987: 315). Of these sites, 20 were found with
Bronze Age occupation, the majority of which were situated in close proximity to the city of Mari and which may have been dependencies of this principality during its occupation (Geyer and Monchambert 1987: 319; fig. 10 maps the location of these Bronze Age sites and their proximity to number 1, which is Mari).

The most significant exception to the rule is the Bronze Age site of Tell Mohasan (Geyer and Monchambert 1987: T. 25, and fig. 9 for location of that site and its geographic relation to other Bronze Age sites). It is situated far to the north of Mari and, unlike the other sites, which are located along the edge of the Holocene terrace bordering the Euphrates floodplain, it is located on top of the elevated Holocene terrace, with the Euphrates running nearly a kilometer away from it (Geyer and Monchambert 1987: 325). Clearly, the availability and conveyance of water would have been a major concern at this site. The other significant feature about Tell Mohasan is that it appears to have been first occupied in the Middle Bronze Age, judging by the total lack of any earlier pottery (Geyer and Monchambert 1987: 325). Based on this information, the researchers have suggested that Tell Mohasan should be identified with the ancient city of Dur-Yahdunlim, built during the time of the king Yahdun-Lim (circa. 1815 B.C.) according to an inscription found at Mari. Apparently, Yahdun-Lim founded the city on a dry and scorched piece of land, where no previous king had built (Geyer and Monchambert 1987: 325; Thureau-Dangin 1936: 49-54). Furthermore, a canal named Išim-Yahdunlim flowed beside the town, and this would accord with Tell Mohasan's proximity to an ancient canal, which was cut from the Euphrates River about 5 km to the northwest (Geyer and Monchambert 1987: 325). Whether or not we accept the identification of Tell Mohasan as Dur-Yahdunlim, we cannot deny the significance of the location of a
Middle Bronze tell beside a canal that presumably would have been responsible for its existence and success. The labour and expense that was necessary for the success of such a project could only have been accomplished by a politically dominant, prosperous and well-administered centre such as Mari.

The surface pottery found at Tell Mohasan is illustrated in the surveyors' report (Geyer and Monchambert 1987: 326-27, fig. 12). As will be discussed in chapter V, the pottery compares favourably with the early second-millennium pottery found at the site of Mari, suggesting Mohasan’s contemporaneity and close association with that site.

Tell Ashara (ancient Terqa)

The mound of Tell Ashara is located approximately 70 km north of Mari on the west bank of the Euphrates River. Tell Ashara’s identification with the ancient site of Terqa was suggested early in this century when discoveries by local villagers and travelers on the mound yielded foundation tablets with the name of Terqa on them (Buccellati and Kelly-Buccellati 1977: 85). Since this time, further epigraphic evidence from the site has supported this identification (Chavalas 1988: 192-98).

There is considerable mention of Terqa in the cuneiform archives found at the Palace of Zimri-Lim at Mari. These documents reflect Mari’s close political and economic relationship with, or control over, Terqa, before Mari’s destruction in 1761 B.C. Various letters and administrative documents mention the name of Kibri-Dagan, who was the governor of Terqa during the reign of Zimri-Lim (Kupper 1947: 149-83; 1964: 105-16; Buccellati and Kelly-Buccellati 1977: 88). There are also letters that discuss the dedication
ceremonies and housing needs of one of Zimri-Lim's daughters as a priestess in the Temple of Dagan at Terqa (ARM 3: 42, 84). Finally, it is believed that one of Zimri-Lim's wives, Yatar-Aya, may have lived at Terqa (Sasson 1984: 248). Documents from the earlier period of Assyrian rule also refer to the city of Terqa, which, along with Mari, fell under the jurisdiction of Shamshi-Adad I's son, Yasmah-Adad (Buia 1993: 38). In several tablets, Shamshi-Adad writes to his son asking of the state of affairs at Terqa (Dossin 1938: 112-13). Other texts from this time refer to the shipment of jars of wine from the harbour of Terqa (ARM 13: 126).

Terqa continued to be occupied after Mari's destruction by Hammurapi in 1761 B.C. Tablets dating after this time have been uncovered at the site, namely in the private archive of an individual named Puzurum (Rouault 1984). They indicate that around 1723 B.C. Terqa shook off Babylonian control and thereafter the city was ruled by a succession of kings belonging to the kingdom of Khana (Rouault 1984: 5; Buccellati 1988: 50). During this time, Terqa was a major independent political unit that controlled the lower basin of the Khabur and the corresponding portion of the Middle Euphrates Valley down to the border of Babylon, possibly located in the vicinity of Khirbet ed-Diniyeh (Buccellati 1988: 46-47). The most recently uncovered tablets at Terqa suggest, however, that the site was again under Babylon's control during the reigns of Ammi-saduqa and Samsu-ditana (1646-1595 B.C.) before passing into the hands of Mittanni rulers (Rouault 1994b: 285).

Excavations of the site of Terqa were carried out for five days in 1923 by Thureau-Dangin (Thureau-Dangin and Dhorme 1924: 265-93). More recent archaeological investigations at the site were conducted between 1976 and 1985 by the Joint American
Expedition to Terqa under the direction of Giorgio Buccellati and Marilyn Kelly-Buccellati. After 1987, the project was taken over by the Centre National des Recherches Scientifiques of Paris, under the direction of Olivier Rouault, who has continued investigations at the site to the present (for the most recent reports, see Rouault 1994a: 142-43; 1994b: 285-88).

None of the excavators of Terqa have provided a final report of their investigations. For published information about the second-millennium B.C. findings at the site, one must refer to the Buccellatis' preliminary reports of their first four seasons (Buccellati and Kelly-Buccellati 1977, 1978-79; Buccellati 1979) and Daniela Buia’s doctoral dissertation (1993), which provides a summary of the excavations of Area F until 1987, including a catalogue of pottery from that area. To date, Rouault has only published brief preliminary reports of his excavations without illustrations of pottery (Rouault 1994a; 1994b).

Buccellati’s first investigations were made in the southern part of the mound in trenches SG 2-3, where a number of jar burials (all adults except one) were uncovered (Buccellati and Kelly-Buccellati 1977: 111-12). Further jar burials (mainly infants), thought to be contemporary with the ones just described, were uncovered in SG4 along the eastern edge of the mound (Buccellati and Kelly-Buccellati 1977: 113). None of the burials had any association with living floors or walls of occupied buildings; rather they appeared to have been dug in open areas after the abandonment of earlier structures (Kelly-Buccellati and Shelby 1977: 172).

Below the level of the burials in SG4, the excavators encountered a deep layer of heavily burnt material, which covered a floor adjacent to a brick wall of a house (Buccellati and Kelly-Buccellati 1977: 115, fig. 6). This floor, designated as ST4 level 15, contained a
large quantity of in situ material, including several whole vessels, stone tools and fragments of bronze implements (Buccellati and Kelly-Buccellati 1977: 117-18). Based on analogies between the pottery from this context and pottery from other second-millennium B.C. sites such as Jidle, dated by Mallowan to 1600 B.C., Nuzi level II and Tell Brak (Buccellati and Kelly-Buccellati 1977: 126), the occupation floor and hence the building with which it was associated was dated to the second quarter of the second millennium B.C. (1700-1650 B.C.). The burials above the “storage room” in SG4, as well as those of SG2-3, were thought to date to a slightly later period, around 1600 to 1550 B.C. (Buccellati and Kelly-Buccellati 1977: 126).

Further excavations were carried out in the following seasons in the area around SG4, which became known as Area C. In the third season the storage room ST4 was re-designated as STA3 (Buccellati and Kelly-Buccellati 1978-79: fig. 3, p. 155), then in the fourth season as STCA3 (Buccellati 1979: 31). The room proved to be part of a large residential building consisting of several small rectangular rooms separated by brick walls often preserved to a height of 2 m (Buccellati and Kelly-Buccellati 1978-79: 125; Buccellati 1979: fig. 17). The earliest floor level of STCA3 (originally designated as level 15, it was re-assigned to level 14 in the subsequent season; Buccellati and Kelly-Buccellati 1978-79: 126) was eventually reached in the other rooms of the building. The floor and fill of room STCA1 were the most significant, since they yielded a small archive of cuneiform tablets, fragments of tablet envelopes and clay bullae (Buccellati 1979: 39, pls.XII-XVI). The tablets were the private contracts and administrative records of an individual named Puzurum, who was probably the owner of the house of STCA (Buccellati 1979: 40). The tablets from the room are all dated
to the period of the Khana kingdom, around 1700 B.C (Rouault 1984: 5). Thus, the occupation of the building and all of the associated artifacts including the pottery from the living floors of this structure must be dated to this period. Significantly, Buccellati’s earlier dating of this building occupation, which was based primarily on pottery analogies, supports the dating provided by the textual evidence.

**Area F.** The other major area of second millennium occupation at Terqa was Area F, situated to the west of Area C, in the centre of the mound. Here in an area of approximately 750 m², the excavators uncovered the remains of several mudbrick buildings (Buia 1993: 15). About 30 distinct rooms or internal areas, which seem to comprise a group of inter-related quarters, were distinguished. Access into a public street to the north was provided by several doorways from these structures (Buia 1993: fig. 3). The most notable structure in Area F was furnished with a baked clay platform in the centre, a set of jars holding clean tablet clay, a jar with six tablet fragments and a small bin which also contained tablets (Buia 1993: 41 and fig. 9, p. 56). This structure became designated as the “scribal installation” and confirmed the administrative nature of the buildings of Area F, which were though to be related in some way to a palace or government structure somewhere else on the mound (Buia 1993: 8; Rouault 1994a: 142).

In her dissertation, Buia describes the occupation history of Area F through seven individual phases. Phases 3 to 7 represent the second-millennium B.C. occupation. During these phases, several minor structural changes were made to the buildings within the area, but the overall architectural layout of this city sector was retained throughout (see Buia 1993: figs. 5-8 for layout of Area F in phases 3-6).
At the time of Buia's study, 36 complete tablets and 41 tablet fragments had been uncovered in Area F (Buia 1993: 8). The contents of the tablets assisted in the dating of each of the phases. Since one of the tablets in phase 6 bears a month-name associated with the reign of Shamshi-Adad I, that phase was assigned to the Assyrian period, described as the Early Mari Period (Buia 1993: 39). Tablet fragments found in phase 5, which were datable to the governorship of Kibri-Dagan, dated that phase to the period of Zimri-Lim, known as the Late Mari Period (Buia 1993: 33). The scanty remains of phase 4 were assigned to the short Old Babylonian occupation at Terqa after the destruction of Mari by Hammurapi, while phase 3 was assigned to the subsequent Khana period, and considered approximately contemporary with the main occupation in Area C (Buia 1993: 23-29).

Excavations halted before much of the earliest phase 7 could be explored (Buia 1993: 47), but a tablet mentioning Yahdun-Lim of Mari, the Amorite ruler who was removed by Shamshi-Adad I, has been assigned to that phase and dates it to around the 19th century (Buia 1993: 9; Rouault 1994a: 143).

In her dissertation, Buia attempted to show how changes in the architecture and ceramic assemblages of the individual structures in each new phase of Area F reflected changes in the functions of the buildings through time. Although this was never successfully achieved (Buia 1993: xxv), her study does include a large and important corpus of ceramic vessels catalogued by phase, many of which have been minutely described and illustrated. The majority of pots derive from phases 6-3 and thus provide a useful early second millennium B.C. sequence which can be compared and related to other ceramic assemblages from the Euphrates region.
Mari

Parrot’s Excavations. Excavations at the site of Mari (Tell Hariri) were first undertaken by André Parrot in 1933, and continued for 21 field seasons until 1975. Parrot published all of his preliminary reports of the excavations at Mari in the journal *Syria* (1936-40, 1952-55, 1962, 1964-74). In addition, his investigations of the Mari temples and his early excavations of the Palace have been published in monographs (Parrot 1956, 1958, 1959 and 1967).

Notable periods of settlement at Mari include the third-millennium B.C. occupation, contemporary with the Early Dynastic period of Sumer, and the early second-millennium B.C. occupation, associated with the Amorite kings of the Lim Dynasty and the Assyrian interlude during the reign of king Shamshi-Adad I. During Parrot’s excavations, the most significant find of the latter period was the so-called Palace of Zimri-Lim. Almost all of Parrot’s field seasons were devoted to the investigation of this large and elaborate complex. Fortunately, in addition to Parrot’s published results, Margueron has provided a synthesis of the investigations of the Palace in a two-volume monograph entitled *Recherches sur les palais Méopotamiens de l’âge du Bronze* (Margueron 1982a).

The Palace of Zimri-Lim. The Palace of Zimri-Lim occupies a large north-central place on the tell of Mari. Excavations have uncovered approximately 200 m x 120 m of the building. The building comprises more that 260 well-preserved rooms, many of which are thought to have had a second story owing to the thickness of the walls and remains of staircases. Many of the floors of the rooms were paved with square baked tiles, while others were simply covered with clay plaster.
Significantly, cuneiform tablets were discovered throughout the palace, in groups or individually in the rooms. In addition there were archive rooms, where hundreds of tablets had been deposited (for example Room 115, a chamber between Courtyard 131 and the ceremonial Courtyard 106; Parrot 1958: 80-81). The tablets cover a time period of about 54 years, beginning with the reign of Zimri-Lim’s father, Yahdun-Lim (1815 B.C.), extending through the reign of Shamshi-Adad I and his son Yasmah-Adad (1798-1775 B.C.), and ending with the reign of Zimri-Lim (1775-1761 B.C.).

The Palace, with its internal division into several main areas, including a royal residence, throne room, religious complex, administrative quarters and storage facilities, is now known to have been constructed in several stages (Roaf 1990: 119). The earliest stage of the Palace comprises the religious complex in the southeast corner, which was built over the third-millennium Pre-Sargonic Palace and “Sacred Area.” Another early construction is the large Courtyard 131 and associated raised “audience” room (132). Such sectors of the Palace are now thought to date back to the Ur III period, in part based on the rather archaic features of the wall paintings in Room 132 (Margueron 1982a: 377; Moortgat 1964: 72-74). Other features of the palace are more recent, including the alterations and additions around the Throne room (Courtyard 106 and Room 64, which serve as the approach to Throne room 64, were added; Margueron 1982a: fig. 254). Based on these arrangements’ similarities to the Old Assyrian Palace at Assur and the subject-matter of the wall paintings (found in Courtyard 106) these components of the Palace have been dated to the reign of Shamshi-Adad I (Margueron 1982a: 377). With the exception of repairs to rooms and slight alterations, all of the major construction on the palace is thought to have been undertaken prior to the reign
of Zimri-Lim. This is rather paradoxical, since the palace was named after that king (Margueron 1982a: 378). Nonetheless, Zimri-Lim did make the Palace his royal residence and it was the focal point of the city during his reign.

Parrot has suggested that the Palace was destroyed on two separate occasions by Hammurapi of Babylon (Parrot 1958: 340-41). Later scholars such as Margueron still agree with this assertion although unlike Parrot, they suggest that only one destruction of the Palace occurred (Margueron 1982a: 379). The other point of disagreement has to do with Parrot’s suggestion that one sector of the Palace was re-occupied shortly after the destruction of the Palace by squatters, owing to the inferior quality of its walls (Parrot 1958: 44-45). Margueron, however, argues that the arrangement of these rooms took place in the time of Zimri-Lim and must date before the destruction by Hammurapi (Margueron 1982a: 230-36, 379).

In summary, the Palace of Zimri-Lim experienced a fairly long occupation that began in the Ur III period, perhaps serving at that time as the residence of a shakanaku (governor), and continuing on into the period of the Amorite occupation. The Palace achieved its greatest grandeur during the time of the Assyrian king Shamshi-Adad I and his successor, the Amorite king Zimri-Lim. This period of grandeur, however, was short-lived, for Hammurapi, in the 32nd year of his reign, captured and destroyed the palace. The palace was left in ruins and was never re-occupied.

The Ishtar Temple and Area of the Ishtarat and Ninni-zaza Temples. In Parrot’s description of his work in the area of the Ishtar Temple, he reports the discovery of a domestic area immediately to the east of the temple precinct (Parrot 1956: 224 and pl. IX for
a plan of this sector). Apparently, he found two levels, one contemporary with the Pre-Sargonic levels d-a of the Ishtar temple, and the other level dating to the same period as the Palace of Zimri-Lim, or somewhat earlier, to the Ur III or Isin-Larsa periods (Parrot 1956: 224, admits that he cannot distinguish the date of the artifacts from these periods). Parrot's catalogue of pottery (1956: 224-32, figs. 108-10) is supposed to derive from the second, later phase. In general the pottery has a great number of parallels with pottery from the Palace as well as Areas A and E, making it highly likely that the pottery dates to the second millennium B.C., prior to 1761 B.C. The exception are a few vessels that are certainly earlier (Parrot 1956: fig. 109: M. 918 and M. 920), and must have come from deeper deposits or mixed contexts.

In Parrot's report of the excavations of the temple complex of Ishtarat and Ninni-zaza (Parrot 1967), there is another small group of pottery that comes from a second-millennium context. Although the temple complex itself was destroyed sometime in the Pre-Sargonic period, the sacred area was covered over in the later periods by modest private houses, graves and drains (Parrot 1967: 13). Some of the pots found in this later level of occupation were illustrated (Parrot 1967: fig. 304) and, because they were similar to pottery in other Middle Bronze sectors of the city, were dated to the Old Babylonian period, contemporary with the occupation of the Palace.

**Mari: Excavations 1979 to the Present.** The Mission Archéologique de Mari was taken over by Margueron in 1979, and has continued to the present. Although there is no final publication yet, annual reports of the excavations at the site have appeared as articles, primarily in publications of *Mari: Annales de Recherches Interdisciplinaires* (volumes 1-7).
Margueron's objective was to investigate new areas of the tell in order to acquire a greater understanding of other features of the city besides the religious complexes and the “Royal Palace,” which formed the bulk of Parrot’s investigations. He aimed to find further evidence dating to the time of the last Amorite occupation of the site, as well as to penetrate into earlier levels of occupation in order to gain a better understanding of Mari’s third-millennium occupation.

**Area A.** The central focus of investigations of the Amorite period at Mari was Area A (Chantier A). The area is situated on a high point near the northeast border of the tell, and about 100 m east of the great ziggurat found during Parrot’s excavations (Margueron 1982b: 14; Beyer 1983: 37). Work proceeded in Area A over six seasons, resulting in the exposure of a large Middle Bronze palatial complex. The building came to be known as the “Palace of the Shakanaku” due to the discovery of an inscription bearing the name and title of a shakanaku of Mari.

To date, about 1000 m² of Area A have been excavated, resulting in the exposure of all of the palace except for its northern limits (for the most recent plan, see Margueron 1993: fig. 2). The building has thick walls, between 2 and 3 m wide (Margueron 1982b: 20), and is characterized by a number of small interconnecting rooms that are arranged around two larger rooms, I and XVI. It is clear that these larger rooms were the focal points of the building. Room XVI appears to have been equipped at one end with a throne dias that was set under a canopy, judging by the post holes surrounding a square area of clean plaster (Margueron 1984a: 14, and fig. 8). A shallow basin of gypsum partially surrounded by a partition wall made of fragments of tabouk was found about 3 m in front of the throne
(Margueron 1984a: 14, and fig. 9). At the opposite end of the room, a staircase approached a raised chamber equipped with a small niche in the wall facing the throne (Margueron 1987: 16). One is reminded of the “throne room and tribune” of the Royal Palace of Zimri-Lim, which is similarly arranged, with a long room equipped with a podium at one end and a raised chamber approached by a staircase at the other end (Parrot 1958: 111-14, fig. 113). Because of the similarities, and the obvious care in the construction and up-keep of room XVI, it is suggested that the building was originally constructed to be the residence and administrative centre of an important individual, perhaps a person of royal lineage or the city’s governor (Margueron 1984a: 19).

The other large chamber, Room I (12 x 7 m. in area; Margueron 1982b: 19), did not contain any distinctive features, except that it had been set over a large vaulted tomb (IXQ50-SE.T6; Margueron 1983: 13 and fig. 3). In subsequent seasons, the observed sinking in the centre of Room XVI made it evident that there was a large tomb under this room as well (IVR2-SE.T7; Margueron 1990b: 401-22). The large multi-chambered tombs were both constructed of baked brick and stone, and bear the distinctive feature of corbelled ceilings. There is no evidence indicating any structural association between the tombs and the palace and thus it seems likely that they were set in before the building was erected (Margueron 1990b: 408). The tombs may in fact be the reason for the positioning of the two largest chambers within the palace. That later occupants knew about the presence of two tombs is suggested by the numerous robber pits that were dug from the later floors and room fill of chambers I and XVI. When the tombs were excavated, they were found to have been completely robbed in antiquity, with the exception of a few pots and scattered bones. On the
basis of this remaining pottery, however, it has been possible to date the tombs to the EBIV period.

Evidence that the palace was occupied in three successive periods has been found throughout Area A. The phases are designated Levels 1, 2 and 3, with Level 1 representing the latest occupation. Although the stratigraphy of the building was established in the one of the earlier campaigns when the palace had not been uncovered in its entirety (see Beyer 1983: 37-60), the overall sequence has remained basically unchanged with the exposure of the rest of the building.

The earliest phase (Level 3) represents the first occupation of the building. During this phase, all of the floors and the bases of the walls were carefully plastered with a layer of djuss, about 6 cm thick (Margueron 1982b: 20). It would appear that the building was used over a fairly long time in this phase, as suggested by the traces of wear and tear on the plastered floors (Margueron 1984a: 14; observed in Room XVI). Consequently, the building was abandoned for a short time. This is suggested by the fact that nearly all the bases of the walls were undermined by erosion. Often, the plinths of plaster that had coated the bases of the walls were completely destroyed (Margueron 1982b: 20). Such a severe degradation of the walls was probably not the result of simple, everyday wear and tear, but the result of a period of time when the rooms of the building were exposed to the elements. The excavators have suggested that the rooms were open to the sky, and that this degradation occurred mainly during a time when the building was abandoned (Margueron 1982b: 20-21).

In the next phase, the building underwent renovations, mainly to repair the damage done to the walls during its period of abandonment. This included, for example, the
placement of baked brick tiles, broken brick or stone, or packed earth into the eroded places at the bases of the walls in order to provide support for the overhanging walls (Margueron 1982b: 21; 1983: 12). The major feature of this period of re-use are the square, baked clay tiles that paved all of the floors of the building, in place of the earlier djuss plaster (Margueron 1982b: 22). In addition, some modifications were made to the original plan. Some of the doorways, for example, were bricked up, new features were installed (a bitumen-lined receptacle and table in Room XIII; Margueron 1983: 11) and, in a significant alteration, a large room was divided into two smaller chambers (Margueron 1983: 11; division of room III by construction of new walls, creating room XV; see fig. 1) There are traces of burning in level 2, found on the walls and floors and further noted by the amount of ashy debris found above the floor, indicating that the building may have been destroyed by fire at the end of level 2 (Beyer 1983: 50; Margueron 1983: 11). In some cases the burned debris within the rooms reached a height of 2 m (Margueron 1983: 11), suggesting that a violent conflagration had occurred.

The third and final phase of the building was marked by a modest re-occupation above the destruction debris in the form of small fragments of floors as well as flimsy walls that were constructed over the older walls. Some of the older walls were re-used (Margueron 1982b: 22), and may have served a wind-breaks (Beyer 1983: 40). Domestic activities were carried out in this area, as is suggested by the presence of fireplaces and tannurs (Beyer 1983: 40). Overall, the general impression of this late phase is that it was occupied by squatters. One may also note that the majority of burials in Area A were sunk from this level (see Beyer's
discussion of the Area A tombs and their relation to levels 1, 2 and 3: Beyer 1983: 42-43, and table 1).

**Area E.** The other major area of investigations of the Amorite settlement at Mari took place in Area E, situated in the north-west summit of the high tell (Margueron 1987: fig. 1). Here excavations revealed the remains of a large building with several rooms.

The function of the building is unclear from the seven rooms that have been explored (for latest plan of building, see Margueron 1993: fig. 13). One of the rooms was paved with square mudbrick tiles (loc. I) in a manner similar to that observed in level 2 of Area A. Two other rooms, loc. II and III, were more unusual. Here the rooms contained three or four rows of mudbrick that had been covered over with a layer of mud plaster (Margueron 1987: 26 and fig. 17 for photo). The function of these rooms is never discussed by the excavators, although it seems possible that the rows of bricks provided a ventilated foundation for the mud floor above, and would have served to keep the contents within the room dry. This architectural feature (known as a grill-plan) has been observed at several Neolithic and Early Bronze sites in Syria and Iraq (Fortin and Cooper 1994: 42).

Apparently, in a small sondage in the eastern part of loc. II, a tiled floor similar to the one found in loc. I was found under the brick rows. One of the tiles was pierced by a jar in which they found pieces of a tablet dated to the period of Yahdun-Lim (Margueron 1987: 26). Furthermore, four broken tablets were found in the layers of fill above and below the floor of loc. I (Lebeau 1987: 443-44). According to the epigrapher, these tablets are dated to the period of Shamshi-Adad I and the reign of Zimri-Lim. Based on these inscriptional finds, therefore, we may date the occupation of the building in Area E from the reign of
Yahdun-Lim up to the destruction of the city by Hammurapi (Margueron 1987: 27). Such a dating is confirmed by the pottery found in Area E, which compares favourably to the pottery found in the Palace as well as that found in levels 2 and 3 of the palace in Area A (Lebeau 1987: 443-62; see also pp. 222-26 in this study).

To summarize, excavations at Mari over the past six decades have provided a considerable amount of information about the site during the early second millennium B.C. The site’s size and the nature of its architecture clearly reflect the importance of the city during this time. Major monumental buildings include the Palace of Zimri-Lim, the Palace of the Shakanaku (Area A), the Area E “administrative” building, and various temples. Tablets discovered in these structures indicate that they were occupied during the period of the Amorite kings, beginning with the Lim Dynasty of the early second millennium B.C., up to the reign of the Babylonian king Hammurapi around 1761 B.C.

Baghouz

Baghouz is the modern name given to the region on the eastern side of the Euphrates River across from Abu Kemal (south of Mari), the last Syrian port on the river before it flows into Iraq. The territory of Baghouz, which contains a series of "hameaux misérables" arranged along a 6 km stretch of land, is bordered on the south and west by the Euphrates River, on the east by the Iraqi frontier and on the north by a neighbouring territory named Soussa. The Baghouz territory is distinguished by the alluvial plain along the banks of the river and a high jebel or rocky elevated plateau that rises up steeply beyond the floodplain (du Mesnil du Buisson 1948: 1, pl. III). It is on this rocky elevation, in various locations, that Le
Comte du Mesnil du Buisson identified tombs belonging to the Middle Bronze Age during his field seasons in 1934, 1935 and 1936. In total, he located and investigated more than 185 Bronze Age tombs, some undisturbed since the Bronze Age, others re-used in later, Parthian, times (du Mesnil du Buisson 1948: 5).

The Bronze Age tombs have been divided into two main groups. The first type of tomb consists of a rectangular, stone-lined cyst covered with large stone slabs, encircled with stones and buried under an earth tumulus (du Mesnil du Buisson 1948: pl. XL). The second type consists of smaller, stone-lined tombs that were generally not circled with stones or covered with an earth tumulus (du Mesnil du Buisson 1948: 31, pl. XLI). Within several of the better-preserved tombs of the first group, the deceased had been laid on a wooden bed and arranged in a flexed position on their sides (du Mesnil du Buisson 1948: 35 and see pl. LVI for reconstruction of the bed of Z 144). Occasionally, various adornments and weapons had been placed by the sides of the deceased (du Mesnil du Buisson 1948: 36), while footstools and tables covered with pots and bowls, presumably for funerary suppers, were laid in front of the beds (du Mesnil du Buisson 1948: 36-37; ). At the foot of the tables were larger, ovoid jars. The smaller graves were generally not so elaborate, containing no furniture, fewer ceramic vessels, and only a few items of jewellery, weapons, or both.

In his publication of the cemetery, du Mesnil du Buisson provided a description and inventory of the items discovered in each of the tombs (Mesnil du Buisson 1948: 63-93). In addition, a great number of the artifacts, especially the pots, were photographed and drawn.

Although du Mesnil du Buisson had established a 15th-century B.C. date for the cemetery, based mainly on ceramic parallels to other sites in the Orontes Valley, several
scholars have questioned this date on the basis of the cemetery's excellent parallels with material from Middle Bronze Age contexts, both in Syria and Palestine (Tubb 1980: 62-65). A further investigation of its relative date within the area of southern Syria will be carried out in chapter V.

**Khirbet ed-Diniyeh (ancient Haradum)**

The southernmost ancient site to be included in the main body of the study of the Middle Bronze Euphrates is Khirbet ed-Diniyeh, located approximately 90 km southeast of Mari and 36 km northwest of ʿAna near the modern border between Iraq and Syria. Excavations at the site, which were undertaken as part of a salvage effort along the Euphrates River in Iraq before completion of the Qadisiyya Dam at Haditha, took place between 1981 and 1988. The expedition was directed by Christine Kepinski-Lecomte, under the sponsorship of the Délégation Archéologique Française en Iraq.

Khirbet ed-Diniyeh is a small site, nearly square in plan and measuring no more than 100 m along its longest edge (Kepinski-Lecomte 1992: 11). The site appears to have had only two major periods of occupation, the Old Babylonian period, from the 18th to the 17th centuries B.C., and the Neo-Assyrian period, around the 11th to 9th centuries B.C. (Kepinski-Lecomte 1992: 9).

The Old Babylonian occupation was divided by the excavators into four levels: 3D, 3C, 3B and 3A, with 3A representing the latest and highest stratum. During these levels, the overall layout, orientation and size of the settlement underwent few changes. Basically, it consisted of units or blocks of residential units, workshops or stalls (see for example,
Buildings 11, 12 and 13, Kepinski-Lecomte 1992: 95-101), a central place and temple, separated from one another by streets running at regular intervals (Kepinski-Lecomte 1992: pls. IV-V). The individual levels are distinguished by rebuildings or minor modifications of the existing mud-brick architecture, and the laying down of new floor surfaces. Level 3B is distinguished by two sub-phases, 3B2 and 3B1; although the same mudbrick architecture was retained through the level, two floor surfaces, separated by 50 cm of earth, were found in association with it (Kepinski-Lecomte 1992: 13). Associated with all levels of the Old Babylonian settlement was a fortification wall, square in plan, that surrounded the entire site, as well as a city-gate, which faced the Euphrates River to the west (Kepinski-Lecomte 1992: 12).

Level 3D, the earliest occupation level, was the most poorly preserved. A thick layer of ash and debris was found over much of the level 3D architectural remains. The excavators suggest that an occupational hiatus took place between levels 3D and 3C, during which time the site was temporarily abandoned (Kepinski-Lecomte 1992: 13).

What is particularly useful for dating purposes are the cuneiform tablets that have been uncovered at Khirbet ed-Diniyeh. The tablets, which are primarily administrative and economic records and letters, occasionally bear the year-names of Old Babylonian rulers. While none of the tablets appear to be associated with level 3D, tablets from the remaining levels can be positively dated to the reigns of the Babylonian kings Samsu-iluna, Ani-Ešuh, Amiditana and Ammisaduqa (1725-1628 B.C.) (Kepinski-Lecomte 1992: 31-36). The frequency of the place-name Haradum in these tablets make it very likely that this was the ancient name of Khirbet ed-Diniyeh (Kepinski-Lecomte 1992: 30). Interestingly, the town
of Haradum is also mentioned in connection with the province of Suhu in several documents from Mari dating to the time of Zimri-Lim. These tablets are usually letters sent by various Mari representatives appointed by Zimri-Lim to report on activities within Suhu (ARM XXVI/2). One of the letters in which Haradum is mentioned describes the movements of the army of Eshnunna, Mari’s enemy at the time. It was written by a general stationed at ‘Ana (Hanat) in year 3 of the reign of Zimri-Lim (Kepinski-Lecomte 1992: 30-31). This is the earliest attestation of the name of Haradum. This evidence prompted the excavators to push the date of the site back to the beginning of the reign of Zimri-Lim of the Mari period, and consequently, to equate the earliest phase, 3D, with that period. The lack of mention of Haradum in documents dating to the time of Hammurapi and the beginning of the reign of the king Samsu-iluna has been equated by the excavators to the inferred period of abandonment of the site between levels 3D and 3C.

The Mari tablets give the impression that Haradum was a subordinate market-town within the state of Mari during the reign of Zimri-Lim, without any administrative control or political autonomy. This situation appears to have altered with the implantation of the Babylonian regime at Haradum under Samsu-iluna and continuing to the reign of Ammisaduqa. The textual sources from this period indicate that Haradum was a thriving centre heavily involved in agricultural activities in its immediate neighborhood as well as trading ventures with other regions stretching from Assur to Emar and along the length of the Euphrates River down to Sippar (Kepinski-Lecomte 1992: 34). Its strategic position on the Euphrates, on the border between southern Mesopotamia and Syria, may have contributed to its success as a trading outpost. Haradum seems also to have served as a military outpost,
as indicated by the presence of fortifications and the mention of soldiers in many of the texts (Kepinski-Lecomte 1992: 34). Furthermore, the town had become an administrative centre, indicated by the mention of a mayor (rabi ḳum) in the tablets and the presence of judges (ṣapitum) (Kepinski-Lecomte 1992: 34).

CHAPTER II ENDNOTES


2. The earliest Antentempels in Syria have been dated to the Early Bronze Age. They occur at Tell Chuera (Orthmann 1990: 1-18), Tell Halawa (Orthmann 1989: 65-66) and possibly Tell Kabir (Level 8: Porter 1995: fig. 3). While there are also other Antentempels at Munbaqa, Steinbau 1 is thought to be the earliest, with its origins around the end of the third millennium B.C.


4. The architecture of the Palace of Zimri-Lim and the Shakanaku Palace compare favourably with the Hill E Palace at Tell Bi’a (see Margueron 1990a: 12-18).

5. The room has particularly good parallels with Room 66, an elevated platform at the end of throne room 65 in the Palace of Zimri-Lim at Mari (Strommenger et al. 1987: 16; Parrot 1958: 111).

6. Sectors D and E comprise the religious sector of the Palace. Margueron 1982a: fig. 149 shows the division of the palace into lettered sections and, on pp. 377-78, summarizes the evolution of the palace.

7. In addition, Margueron (1987: 15) found fragments of burned mud with matting and rope impressions on them in throne room XVI, indicating how the roof was constructed.
CHAPTER III

CERAMIC TYPOLOGY BASED ON THE MIDDLE BRONZE AGE SEQUENCE
OF AREA F, TELL HADIDI

III.1 Introduction

This chapter summarizes the results of the excavations of Area F at Tell Hadidi, describes the pottery that was found there, and formulates a typology based on those findings. My objective is to develop a Middle Bronze Age pottery sequence into which all of the Euphrates sites' pottery can be fitted and consequently dated. The ceramic material from Area F has provided a means by which such a pottery sequence may be developed, since it consists of a reasonably large and representative Middle Bronze corpus. The pottery typology introduced in this chapter is formulated with an emphasis on chronological developments as opposed to functional characteristics, and is simply structured in order to facilitate inter-site comparisons.

III.2 Tell Hadidi: The Stratigraphy of Area F

A description of the excavation and stratigraphy of Area F at Tell Hadidi serves as the introduction to the description and typology of the Hadidi pottery, since it is the context from which the greatest quantity of ceramic material is derived, and upon which the subsequent pottery sequence is chiefly based.
Area F is located along the southeastern slope of the high tell at Hadidi, approximately 350 m south of Area B, the other main exposure of Middle Bronze occupation on the tell (Dornemann 1979: 115, fig. 2 and see fig. 2 here for plan of the tell and location of Area F).

Area F was first excavated by a Dutch team from Leiden University. During their 1973 and 1974 field seasons they uncovered a series of architectural layers (Dornemann 1979: 132). The Dutch have not published the details of these excavations, but there are illustrations of some of the pottery from this context in an article about Syrian pottery technology (van As 1984: 129-60, figs. 4-7). Since much of this published pottery has excellent parallels with Late Bronze Age pottery found by the American team in other areas of the tell (Dornemann 1979: 136, fig. 24), it is evident that the Dutch were digging chiefly within levels dating to the Late Bronze Age.

Work in Area F was resumed by the American team, under the direction of Rudolph Dornemann in July, 1974. Below the layers of Late Bronze architecture, in an excavation area measuring approximately 5 m x 5 m, the excavators encountered a series of sloping layers of gravel and ashy fill containing large amounts of pottery (Dornemann 1979: 132). In addition, they exposed the remains of a large potter's kiln, located in the centre of the trench in what appeared to be an elevated position in relation to the tipped layers of ash that sloped away from it. Based on this evidence, and the fact that the ash contained great amounts of sherds, several of which were very large (occasionally, up to 1/3 of complete vessels were found intact), warped and overfired, the area may be interpreted as a site of pottery production, with the tipped fill representing ashy debris thrown from the kiln and the
Fig. 2: Contour Map of Tell Hadidi, showing locations of Areas F and B (After Dornemann 1979: fig. 2)
pot sherds representing wasters that the potters had rejected after they had been mis-fired in the kiln.

Drawings of the North and South sections of Area F are provided in figs. 3 and 4. They indicate that excavations exposed several layers of deposition to a depth of over 4 m in Area F, and that the layers had been divided into several loci. A new locus number was assigned when the excavators encountered a new feature or when a change in the colour and consistency of the fill was noted. Several of the loci were encountered only in specific areas of the trench. In particular, loci 5 and 7 pertain to the exposure of the kiln that was situated in the central part of the trench and whose presence cannot be observed in the North and South sections. Locus 5 is described as representing ashy material that was encountered around the kiln, while locus 7 represents the actual removal of the kiln down to its lowest floor phase. In association with loci 5 are 7 are the sloping, tipped layers of ash, represented by loci 1, 2, 3, and 6, although their precise stratigraphic relationship cannot be determined.

Locus 4, encountered only in the northwest corner of the excavation trench, is described as a gravel fill, consisting of layers of stones and ash. According to the section drawings, locus 4 overlies locus 1, but its relation to loci 5 and 7 is uncertain. It is suspected that locus 4 represents material deposited after the kiln went out of use, although this cannot be confirmed. In contrast, loci 1, 2, 3, and 6 represent material that may have accumulated while the kiln was in operation. This would account for the heavy concentration of ash in these layers as well as the high quantity of vessel fragments that were found within the layers, a great number of which were probably kiln wasters.
Fig. 3: Tell Hadidi Area F, South Section
Fig. 4: Tell Hadidi Area F, North Section
Below the thick deposit of locus 6 were loci 8-13, which contained coarse charcoal particles, bricky material and ash, alternating with layers of compacted clay, and finally a gravel layer (locus 13), which was reached approximately 4 m below the level at which the American excavators had begun excavations in Area F. In contrast to the sharply tipped layers above, these earlier loci appeared more horizontal in section. It is possible that the earlier loci represent fill dating before the construction and use of the kiln. Indeed, considerably less pottery was found in these loci. The original function of Area F during the time of these earlier layers, however, could not be determined.

The report suggests that locus numbers were often not changed until the excavators were certain that they were in new strata, so it is possible that some mixing of the material occurred between the loci. Some mixing may also have occurred as a result of trying to follow diagonal, sloping layers rather than horizontal strata. Despite these stratigraphic reservations, however, and based on the existing descriptive daily journal reporting the excavations and the available drawings of the trench sections, one may summarize the sequence of loci, from the top and latest to the lowest and earliest deposition within Area F:

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<th>Locus:</th>
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<td>1 5 (ashy deposition around top of kiln)</td>
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<tr>
<td>Latest</td>
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<td>3</td>
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<td>Earliest</td>
<td>7 (earliest phase of kiln)</td>
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<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>
III.3 The Pottery of Area F, Tell Hadidi

A total of 1381 diagnostic pottery sherds represents the artifactual material obtained from the loci of Area F. The sherds include 602 rims, 156 bases, 611 decorated bodysherds and 12 handles. Unfortunately, there are no data available on the number of sherds that were not diagnostic (i.e., undecorated bodysherds). Diagnostic pottery sherds were collected from every locus in Area F except loci 9 and 13, which yielded no ceramic artifacts.

Since the loci from Area F were superimposed strata of what was probably a rubbish tip, all of the pottery is considered to derive from a secondary context. That is, pots were thrown in this area after they were used and broken, or they represent rejected wasters that were thrown in the tipped-fill after being fired in the kiln and judged unsuitable for use by the manufacturers. It does not appear that any pottery sherds were found within the kiln itself. There may also be a few sherds in Area F that derive from a tertiary context. This is suggested by a small number of sherds which represent vessel forms that are diagnostic of the EBIV period at the site, and the fact that they are often small and fragmentary. It is possible that these “early” sherds were mixed in with the later material after having been disturbed and shifted out of their earlier contexts, perhaps when the kiln was installed and the area around it was initially established as a pottery production site. Unfortunately, there is no way to verify the presence of such tertiary sherds, particularly since the early part of the MB sequence may have continued to produce vessels in the EBIV tradition. Consequently, all of the sherds have been treated as one contextual unit.

The diagnostic sherds were collected and recorded according to the locus from which they were retrieved. Since the loci within Area F comprise superimposed strata, there is a
chronological ordering to be acknowledged. Thus, potsherds from loci 10 and 11 are from a later period of deposition than those from locus 12 since they overlie locus 12. This does not mean, however, that major temporal changes can be recognized in the sherds from the superimposed loci; the time span between the individual loci may be very short. This matter will be addressed again in the chronological analysis of chapter IV.

Several sherd joins were spotted during a preliminary study of the pottery. The sherds were then either glued or kept together in boxes. In conducting the sherd count, the joined pieces were counted only as one item. In almost all of the cases, the sherds that were found to join together came from the same locus number. The exception was a large closed form in which two of its sherds came from locus 6, while the other two were assigned to locus 3. This mixing probably resulted from the fact that loci 3 and 6 consist of diagonal layers that were not excavated with exact precision. The four sherds were counted as one item, and assigned to locus 6, the earlier of the two strata.

Table 1 provides a count of the diagnostic sherds from Area F, indicating the total number of sherds from each diagnostic category as well as each individual locus. The loci are arranged in their stratigraphic sequence. Thus locus 12 at the bottom of the table represents the earliest lot with potsherds, locus 11 is the next earliest, and so on, up to locus 4, which contains the latest deposition of sherds. As was reported earlier, the position of locus 7 within the arrangement is somewhat problematic, since there are no written or illustrated details about its stratigraphic relationship to the other strata. A further difficulty arises with the fact that, in removing the kiln, the excavators describe only the removal of the kiln's "lowest floor level." Since it is likely that the material from locus 6 represents the by-product
<table>
<thead>
<tr>
<th>Locus</th>
<th>RIMS</th>
<th>BASES</th>
<th>DECORATED BODYSHARDS</th>
<th>HANDLES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>28</td>
<td>15</td>
<td>22</td>
<td>2</td>
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<tr>
<td>12</td>
<td>19</td>
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<td>0</td>
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<td>25</td>
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<tr>
<td>TOTAL</td>
<td>602</td>
<td>156</td>
<td>611</td>
<td>12</td>
<td>1381</td>
</tr>
</tbody>
</table>

Table 1: Area F Diagnostic Sherd Count According to Loci Arranged in Stratigraphic Order (locus 12 is earliest)
of the kiln during its operation, the kiln’s earliest phase probably originated just before locus 6, although it is still not possible to confirm when the later phases of the kiln were constructed. Similarly, the precise stratigraphic position of locus 5 is unknown, except for its relationship to locus 7. Some caution has been exercised in the use of pottery from the two loci. Although the sherds are included in the Area F typology, the findings are not used in any of the subsequent chronological analyses. This is because in the presence of a chronological development among the sherds of this corpus, the material from the two loci, whose position to the other loci is poorly understood, could generate faulty and conflicting results.

III.4 **Typology of the Area F Pottery**

**Introduction.** A classification, with the objective of identifying smaller groupings of sherds based on definable similar traits was carried out on the pottery corpus from Area F at Tell Hadidi. Forming this typology made it simpler to find patterns present in the material that would otherwise have failed to emerge given the quantity and complexities of the raw data (Shennan 1988: 195). The typology facilitated comparative analyses between the pottery from Hadidi and other sites, with the overall aim of better understanding chronological relationships and intersite interaction.

The pottery sherds were classified into groupings based on the entire corpus from the earliest to the latest strata. I could not be sure that the sherds from the successive loci reflected any significant chronological developments and did not wish to presume from the beginning that they did. On preliminary visual inspections of the sherds, several incidents of
similarities between sherds from different loci were found, confirming the worth of a classification based on all of the sherds of the corpus. To facilitate the identification of chronological developments within the typology in the event that they were present, each sherd’s individual context was retained and recorded.

Classification efforts focused chiefly on the rim sherds, rather than bases or body sherds. This was because of the large number of sherds in this category, and because the rim sherds yielded the greatest information about the original vessels’ stance, size (determined by the rim diameter) and particular stylistic characteristics that often appear on or just below the rim. There would have been other ways of classifying the corpus; for example, it would have been possible to order all of the sherds according to attributes relevant to the way in which they were manufactured, or according to the types and proportions of their mineral inclusions. But these kinds of classifications would have produced very large and rather unwieldy categories, and would not have considered size or form characteristics, which appear to reflect best the original function of the vessels, as well as chronological developments.

The bases yielded less information about the original appearance of the vessel. Only a few types of bases were identified and it is likely that the same type of base was used for a variety of vessel forms and vessel sizes. The various forms of bases are included in the Area F typology but they have not been used in any of the subsequent chronological analyses.

The decorated body sherds consisted mainly of sherds with applied rope or “piecrust” ledges and sherds with incised decoration found in the form of one or two incised lines, an incised pattern made with a comb-like instrument, or incised wavy lines, usually found in conjunction with the comb-incised pattern. A very small number of body sherds were painted,
either black or red. It was often possible to guess at the type of rims with which the body sherds would have been associated, because of similarities in sherd thickness and the fact that many of them shared the same exterior decoration. This body sherd information served to provide additional details about particular vessel types in terms of their overall appearance, how they were manufactured, chronological developments and typological associations that were not indicated by the rim fragments alone.

Regarding the rim sherd classification, primary consideration was given to the appearance of the rim sherds in profile. In this way, major emphasis was placed on the form and size of the rim itself, and the form of the neck and sometimes the shoulder of the vessel. The next important consideration was the outer diameter of the rim, which was used to "size" the vessel in comparative settings. Lastly, consideration was given to the stance of the vessel, since it often provided additional information about the original form and function of the vessel.

In the process of classifying sherds according to these rim criteria, it appeared to me that "real" types could be recognized within the data, as opposed to understanding types as analytical constructs (Rice 1987: 283) that were being created artificially. "Real" types are thought to reflect the original categories of vessels devised by the ancient people who manufactured and used them. In this way, real types represent patterned behaviour on the part of the ancient people, although admittedly, the patterning does not always correspond to consciously or explicitly held notions (i.e., mental templates) concerning the objects (Rice 1987: 283-84). I am confident that several "real" ancient categories of vessels have been discriminated among the Area F sherds, owing to the identification of patterning among the
sherds. The patterning was particularly evident when it involved similarities among sherds in more than one attribute category. It may also be noted that, in the majority of these cases, the patterning was most readily identified when working within categories containing high numbers of similar sherds. So, for example, it was clear that pots with rolled rims (type C11) formed a "real" type, not only because they shared the same rim form, but also because all 21 of the sherds clustered around a 29 cm rim diameter. Additionally significant was the fact that calcite temper occurred in the majority of sherds within this cluster, although it was rarely found in other vessel groups.

The limited quantity and fragmentary state of some of the rim sherds, however, did not always permit an effective identification of real types. There were incidents where only a very small number of rim sherds appeared similar and, consequently, it was impossible to know whether or not the features by which they were identified were attributes of a "true" category or whether they comprised an artificial construct. In instances such as these, published material from both Hadidi as well as other MB Euphrates sites where known types have been identified often helped to confirm certain classifications of pots.

I was also aware of the shortcomings of attempting to discriminate types according to associations among rim forms and rim diameters only. There were cases, for example, when the rim form remained more or less the same over a wide continuum of rim diameters ranging from 8 cm to over 50 cm, in which no natural divisions or clusters appeared to exist. Often the size of the rim was proportional to the size of the pot, although in the largest pots there was even a great deal of variation in this respect. Interestingly, however, when the information from associated decorated body sherds was added to the data on rim form and
diameter, it was possible to identify stylistic features that naturally divided medium-sized vessels and large vessels, thus providing some "real" size distinctions within this large corpus. Such a case, importantly, confirms the usefulness of considering several attributes together at the same time in order to recognize significant patterns or divergences.

No attempt was made at developing some sort of computer-aided cluster analyses to differentiate between types; in any case, I was dealing with a small number of attributes and overall quantities of sherds, and it seemed readily apparent that almost all of the significant patterns in the corpus could be detected through visual sortings and simple rim measurements.

Fortunately, the Area F typology made it easier to detect developments or changes in the Hadidi vessels through time. This information assisted in formulating a MB pottery chronology for Tell Hadidi, and facilitated the task of constructing a relative chronology into which all of the Middle Bronze Euphrates sites could be arranged.

A brief description of the rim-sherd typology is given below, prefaced by a few general observations about the sherds. Each rim type is provided with a description of its basic characteristics, in addition to relevant information, if any, about the way in which it was manufactured, its mineral inclusions, comments about the suggested function of the vessel, notes on its size and breakage, and decoration. Additional information about certain types, provided by the decorated body sherds, will be included in the discussion of the particular rim type with which the body sherds are thought to be associated. The total number of sherds belonging to each type, as well as the number of sherds occurring in each locus per type will also be reported in the rim-sherd typology. Note that since no rim sherds were found in loci 9 and 13, these strata have not been included in the count for each rim type.
**Forming Features.** All of the sherds represent vessels that were manufactured on the fast wheel. Evenly spaced, concentric circles appear on the interior walls of the sherds. It was not possible by visual analysis alone to detect areas where two sections of the vessel may have been joined, except perhaps in the case of the sherds of type C12 (see p. 97 below). In many instances, the interior wheel striations appear much finer and more invisible on sherds below the rim and down to the shoulder, as opposed to the lower parts of the vessel. This may have been the result of the potter’s efforts to smooth the upper, interior vessel wall with his hands or a smoothing tool.

**Inclusions.** A binocular microscope, with a 10-40 x magnification, was used to examine and identify the inclusions within the walls of the vessels. Three mineral inclusions occur in almost all of the sherds. They are quartz (white, translucent, crystalline and very hard), feldspar (grey, opaque, hard, and broken in cleavages) and a hard, black, volcanic mineral, possibly basalt or pumice. The mineral particles are silt- to sand-sized, smooth and rounded, suggesting that they occurred naturally in the river clay and were not added deliberately to the clay in the process of production. Some of the sherds, however, also contain larger, grit-sized particles of quartz that are quite angular in appearance, suggesting that they were deliberately crushed and added to the clay by the potter (Rye 1981: 37). Other inclusions, occurring with less frequency, are red chert, limestone, calcite and a soft, unidentified red mineral. It is suspected that these inclusions were also deliberately added to the clay, and facilitated either the construction of the vessel, or its subsequent use.

**Colour.** The sherds vary greatly in colour, even those belonging to the same type or sub-type. They are generally pale yellow, buff pink, reddish pink, light olive or grey in colour.
on the exterior and interior, while their cores are pink, reddish pink and, less frequently, grey. The variety in colour is thought to be related to the vessels' placement in the kiln and the fluctuating firing rates and atmospheres under which they were fired. Several of the sherds have grey or black fire clouds covering both their exterior and cores, suggesting breakage and differential access to air in the kiln (Rye 1981: 120) rather than smoke-staining during their subsequent use over sources of heat, which would have produced staining on the exterior wall only.

There appears to be no statistical association between particular colours within the corpus and the typology provided here, nor are there distinct changes in the colours through the various superimposed loci. I have chosen not to conduct an in-depth recording and study of the colours observed on the sherds, since I feel that the results would not contribute significantly to an understanding of the typology or the chronology of this particular assemblage. In any case, the colour data cannot be used in comparative studies involving other sites' published pottery, since that information is rarely available.

**General Classification.** The rim sherds have been divided into two main categories: open forms and closed forms. Open forms generally consist of types of vessels whose rim diameters are equal to or greater than the vessel's maximum diameter (Rice 1987: 212), and have no restricted neck or rim. Closed types are vessels that have restricted openings or necks. Their rim diameters are less than their maximum diameters. These very simple descriptive categories were chosen because the use of terms such as jar, bowl, vat, etc. tend to imply a functional value without clear indications that such was the vessel's intended use (Rice 1987: 212).
Each type of open or closed pottery form has been assigned an abbreviated code consisting of the letter O for Open Form or C for Closed Form, followed by a digit identifying it within each of these categories (i.e. O12). In addition, if the types have been divided into sub-types, they are indicated by lower case letters after the code. The sub-types generally consist of particular size and stance specifications, which may be a truer reflection of the original vessel's function than the types, but they do not necessarily carry any chronological value.

Typology: Closed Types C1-C12

C1 (fig 5 a-j): Small cup-form with a simple, pinched, out-turned rim. The vessel wall below the shoulder is either angular or rounded in profile. Outer rim diameters range from 6 cm to 18 cm but the majority of the sherds (23 out of 31) fall within the 8-12 cm range.

Quantity: 31

Distribution of Type C1 among loci:

<table>
<thead>
<tr>
<th>Locus</th>
<th>12</th>
<th>11</th>
<th>10</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>3</th>
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<th>5</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of sherds</td>
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<td>1</td>
<td>0</td>
<td>5</td>
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<td>17</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>31</td>
</tr>
</tbody>
</table>

Dornemann (1992: 79) says that the tendency for angularity in the cup profiles increases through time, becoming very common late in the Middle Bronze Age. There is, however, no indication of this development in the Area F corpus (the sherds from the latest loci appear with graceful, rounded profiles). In any case, only a small proportion of the sherds has a sufficient part of the cup preserved below the shoulder on which to observe this particular attribute.
C2 (fig. 5: k-l): Vessel with a restricted neck, 1-2 cm in length. The rim is thickened and flared, or rolled over. Outer rim diameters fall between 12 and 15 cm. The vessel wall below the rim is relatively thin, measuring less than 0.7 cm. A wash or slip appears to have been applied to the exterior. The vessel was likely a small liquid storage jar, not unlike the vessel illustrated in Dornemann 1992: fig. 3:20.

Quantity: 8

Distribution of Type C2 among loci:

<table>
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<td>1</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

C3 (fig. 6: a-b): Small vessel with a very fine, thin wall. The rim is slightly thickened and flared. In both examples, the exterior surface is covered with a cream-coloured slip that has been gently burnished. There are one or two ridges on the upper shoulder of the vessel. The outer rim diameter measures 10-12 cm. Analogous to this form is the complete vessel illustrated in Dornemann 1992: fig. 16: 9, which is also slipped and burnished.

Quantity: 2

Distribution of Type C3 among loci:

<table>
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<th>10</th>
<th>8</th>
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<th>5</th>
<th>4</th>
<th>total</th>
</tr>
</thead>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>2</td>
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</tbody>
</table>

C4 (fig. 6: e-d): Jar-like profile with a restricted neck, 1-2 cm long, and a flared, thickened rim. The outer rim diameter measures 12-15 cm. The vessel wall below the rim is 0.7-1 cm thick. Heavy smoke staining is visible on the exterior and interior of two of the three sherds.

Quantity: 3
C5 (fig. 6: e-h): Jar with a restricted neck, 1-2 cm long, and a flared, thickened rim. The outer rim diameter measures 18-30 cm. The vessel wall below the rim is 0.7-1 cm thick. Several of the sherds are heavily tempered with grit-sized particles of quartz, suggesting an association with the closed type C12. Dornemann also noted this relationship in his typology of the sherds from Area B (Dornemann 1992: fig. 4:7, in association with fig. 4:8-10, and fig. 17:12-13 in association with fig. 17: 4-9), although his identification of these vessels as cooking pots (Dornemann 1992: 80) is suspect. No smoke staining is evident on any of the sherds.

Quantity: 22

Distribution of Type C5 among loci:

<table>
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<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>

C6 (fig. 6: i-n): Jar with a restricted neck and an out-turned, flanged rim. The flange on the rim appears to have been produced by folding the rim over onto itself. The outer rim diameter measures between 11 and 18 cm, although the majority of sherds (31 out of 35 examples) cluster within the 12-14 cm range. Smoke-blackening is not evident on any of the sherds. One rim (6.49.1060) is olive-green in colour and extremely warped from over-firing. The clay of these sherds comprises silt-sized particles of a black, possibly volcanic mineral, feldspar,
quartz and a soft red mineral. In several cases, the red mineral appears to have been burned out, leaving a small void surrounded by a red aureole. The fine inclusions and the high firing temperature, indicated by the warped sherds and the sherds with voids and red aureoles, suggests an attempt to produce a well sealed, non-porous clay vessel (Kolb 1988: 199).

Such a vessel would have been ideal for the storage of liquids. The vessel’s narrow rim opening and restricted neck further suggests its function as a liquid container. Preserved examples of this type of jar are pictured in Dornemann 1979: fig. 22:7 and 15; and Dornemann 1992: fig. 3:23 (in which comb-incised bands occur on the shoulder) and fig. 7. They indicate that the vessel has a globular body and a flat or rounded base.

Quantity: 35

Distribution among loci:

<table>
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<td>0</td>
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<td>2</td>
<td>35</td>
</tr>
</tbody>
</table>

C7 (fig. 7: a-b): Jar with a restricted neck and an out-turned multiple flanged rim. The outer rim diameter measures between 12 and 14 cm. The form and size of the rim and the neck, as well as the flanged profiles of the rims, strongly argues for similarities in function between the vessels of types C6 and C7.

Quantity: 4

Distribution of Type C7 among loci:

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</tbody>
</table>
C8 (fig. 7: c-d): A neckless pot with a globular or oval body. The rim is thickened and projects inward. The inner rim diameter ranges between 19 and 29 cm. No smoke-staining is evident on any of the sherds.

Quantity: 9

Distribution of Type C8 among loci:

<table>
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<tbody>
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<td>0</td>
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<td>9</td>
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</tbody>
</table>

C9 (fig. 7: e-f): A vessel with a folded-over, flanged rim. Its outer diameter measures between approximately 24 and 38 cm. All of the sherds are broken just below the rim and thus provide no information about the original form of the vessel. Pots resembling deep kraters with similar rim forms and diameters, however, are documented in Dornemann 1979: fig. 23:3 and 7, and may be analogous. The Area F examples are all dark red in colour, and have a coarse fabric consisting of grit-sized, limestone inclusions.

Quantity: 3

Distribution of Type C9 among loci:

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C10 (fig. 7: g-h): Medium-sized pot with a globular or oval body. The rim is slightly thickened and is distinguished by its vertical stance and multiple ribbing. The outer rim diameter measures 17-28 cm.

Quantity: 3
Distribution of Type C10 among loci:

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C11 (fig. 8: a-c): Globular jar with a short, restricted neck and a flared, rolled-over rim. The outer rim diameter measures between 24-31 cm. All of the examples are uniformly tempered with crushed, sand to grit-sized particles of crystalline calcite, except for one, which is tempered with limestone. Both calcite and limestone are frequently added to vessels intended for use over sources of heat, as they help the vessel to withstand thermal stress (Rye 1981: 33; Rice 1987: 229-30). This, and the fact that several of the sherds show traces of heavy smoke-staining indicates that the vessel served as a cooking pot. All of the sherds are a uniform red-brown colour except for one overfired yellow sherd that is covered with rhomboidal voids, probably caused by the burning out of the calcite temper (Orton, Tyers and Vince 1993: 236, Table A.2).

Quantity: 21

Distribution of Type C11 among loci:

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C12 (fig. 8: d-h): Jar with a simple, folded-over, flattened rim. Its body is globular or oval in shape. The outer rim diameter measures between 11 and 31 cm., with two major clusterings around 23 cm and 15 cm.

Of the 93 rim sherds belonging to this type, only five have a raised ridge below the rim, clearly distinguishing this type of vessel from the projecting-rimmed jars of types C13+
which invariably possess this attribute. 31 of the rim sherds of type C12 have preserved shoulders, and on 16 of these, a band of one to four wide, grooved lines encircle the shoulder. Analogies to these decorated sherds are illustrated in Dornemann 1992: fig. 17:9. Only two of the sherds have preserved comb-incised bands. 11 other sherd fragments have horizontal breaks just above the supposed area of the grooves, possibly indicating a weak area of the vessel. It is possible that two sections of the vessel were joined at this juncture. Further support for this is given by the concentration of grit-sized quartz particles in the clay wall in this area of the shoulder, observed on 26 separate sherds. I suggest that the large particles of quartz were deliberately added to the wet clay in order to decrease its plasticity, facilitating the joining of the body to the upper portion of the vessel, which may have been formed separately on the fast wheel. In the process of drying, the reduced plasticity of the clay at the crucial join would have lowered the amount of shrinkage and reduced the chances of the vessel developing cracks. In any event, such a jar was probably not used in cooking, since heavily quartz-tempered clay does not withstand thermal stress very well (Rye 1981: 34; Rice 1987: 95-96). Thus, similar sherds from other areas of the site, examples of which are published in Dornemann’s 1992 treatment of the Hadidi pottery (figs. 4: 8-10 and 17: 4-9), probably should not be regarded as “cooking pots” (Dornemann 1992: 80, for this designation).

Types C12 and C5 may be related to one another, since both use quartz as a temper and have similar ranges of rim diameters. Their unusual attributes possibly point to the presence of a distinct production technique or possibly even an independent manufacturing
centre. Furthermore, the high proportion of these sherds (115 out of 601 sherds), and the uniformity of their appearance suggests that they were mass-produced.

Quantity: 93

Distribution of Type C12 among loci:

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Sub-Types: C12a and C12b.

C12a: The vessel's outer diameter is greater than 18 cm.
C12b: The vessel's outer diameter is less than or equal to 18 cm.

Closed Types C13-C22.

Sherds belonging to these types have similar attributes. The most notable similarities are the rims, which are turned out and flat or rounded on top. Over half of the rims are ribbed or rilled. The ribbing was produced by the use of a mould or a blunt grooving instrument. The other notable feature of the sherds is the raised collar found below the rim, which occurs on the majority of examples.

All of the sherds comprise the same silt- or sand-sized inclusions of feldspar, ground-up quartz and a black mineral (possibly basalt), although their proportions differ from vessel to vessel. From visual inspection, all of the vessels appear to have been manufactured on the wheel, involving the same forming and finishing techniques. There is no indication that parts of the vessels were made separately and attached later (with the exception of the piecrust ledges, which were probably added after the vessel had been formed), as in the case of Type C12. In all, the vessels were well-made, reflecting a high degree of skill and expertise on the part of their manufacturers.
One may note that 42% of the rim sherds from Area F belong to Types C13-C22, that
the sherds represent on average the largest specimens in the corpus, and that the group has
the largest number of warped and overfired examples. All of this information suggests the
many of the sherds existed in some relationship to the kiln that was uncovered in Area F.
They may represent wasters that were rejected from the kiln because they were overfired or
else they had broken or cracked in the process of firing.

The classification of the sherds within this group of closed forms was rather
problematic. Unlike the other types, in which there appears a close association between rim
form, rim width and rim diameter, in this class of sherds, there is a long continuum of rim
diameters ranging from 8 to over 50 cm, in which similar rim forms occur. Faced with this
situation, it was difficult to decide whether to classify the sherds according to similar rim
forms regardless of size and stance, or vice versa: to create size categories regardless of the
rim forms. The latter classification would have been an attempt to place the vessels into their
original functional categories, in the belief that rim size and diameter is a reflection of
function, but there would have been a high degree of subjectivity in the creation of these
categories, owing to the lack of any detectable natural divisions in the rim sizes and diameters.
In the end I opted to classify the sherds according to overall rim form similarities regardless
of their size, except for a primary sorting into what were considered medium and large-sized
vessels, and which turned out to have some "real" value (see pp. 102-103 below). The
decision to type sherds in this way was prompted by a preliminary sorting, which indicated
that most of the chronological information imbedded within the assemblage was to be found
among the various form and stylistic attributes of the sherds, as opposed to their size
attributes. Since the first priority in this study is to ascertain the date of the pottery relative to other sites’ pottery, I felt that a classification reflecting chronological developments must take precedence over one that tries to understand functional characteristics of the assemblage.

Thus, pots were classified according to the main form attributes observed on the rim sherds. These included the presence or absence of ribbing on the rim, and the presence or absence of projections on the inside edge of the rim. A few other attributes, such as the presence of very rounded rims (C15), and the presence of only lightly ribbed rims (C19), were deemed different enough to merit their own categories.

Even ordered according to these main categories, there was still an enormous variety within each of the types. Among the ribbed rims, for example, there were rims that were fairly rounded on top, while others appeared quite flat. Further, there were rims that had very deep and widely spaced ribbing, while others were characterized by narrow and shallow ribs.

The enormous diversity of individual examples, despite their overall similarities in form and ware, is difficult to explain. One can suggest that they indicate the presence of a number of different specialists working within a production centre. The potters may have shared the basic techniques of forming and the range of popular stylistic features, but had the license to produce vessels according to their own particular preferences within that range. The variety of rim examples within each of the main types is not the result of a long passage of time in which several changes and developments occurred, as might be postulated. The variety of examples derives from vessels that co-existed, as is indicted by their co-occurrence in individual loci. This is particularly the case with locus 6, in which, among the ten main types (C13-C22), there are at least 70 different sub-forms.
As noted above, the size of the rims, rim diameters and the overall stance of these vessels is also divergent. Although the classification depends on the appearance of the rim, one basic separation was made between what was considered medium-sized vessels and large vessels. Medium-sized vessels possess a rim thickness that generally does not exceed 2.8 cm. The rims of the large vessels are greater than 2.8 cm in thickness. The thickness of the rim is almost always in direct proportion to the thickness of the vessel wall below the rim, which reflects the original heaviness and strength of the vessel, but that information is not preserved in every example. The rim diameters of the vessels also seem to be related to the rim widths although less so; medium-sized vessels generally do not have diameters greater than 30 cm, although there are a few exceptions at the end of the spectrum which reach 40 cm, while the larger vessels have on average greater rim diameters, although again, there are exceptions to be found at the beginning of the spectrum.

Despite the suspicion that the sherds had been divided into medium and large sizes by an artificial size specification, the decorated body sherds provided some relevant and significant data. Diagnostic body sherds from Area F consist of 199 sherds with incised-comb bands, 25 sherds with a combination of comb incised bands and incised wavy lines, 15 sherds with wavy lines only, and 319 sherds with piecrust ledges. Piecrust ledges are applied, raised strips of clay that wrap around the vessel, and are often decorated with finger or fingernail impressions, or grooves made by a blunt incising instrument. Piecrust ledges are most commonly found at the shoulder of the vessels, (sometimes in the place of the raised collar below the rim), but sometimes occur in bands all the way down to the base of the vessel. There does not seem to be any functional use for these piecrust ledges. They are found on
extremely large and heavy vessels, where it is unlikely that one could pick up the vessel at the ledge without it coming apart from the body. One can only suggest that the ledges served as stylistic or decorative features like the other incised patterns that were mentioned above.

What is particularly informative about the body sherds is that they can be sorted into size categories according to the decorative styles just described, particularly the presence or absence of piecrust ledges. It would appear that sherds with piecrust ledges only occur on very thick body sherds, measuring more than 1.5 cm, and that these body sherds have an association with the large rim sherd category devised above on the basis of rim thicknesses (rim thicknesses that exceed 2.8 cm). Further support of this is given by the fact that among all of the medium-sized rim sherds classified as types C13-16, none of the sherds with preserved shoulders have piecrust ledges, whereas, among the large rims of types C17-22, sherds with preserved shoulders and bodies often have some form of piecrust ledge (see for example, fig. 13:a and c). Piecrust ledges, incidentally, have not been found on any other vessels besides types C17-22. Comb incising and wavy-line decoration is a more problematic feature. Although it generally occurs on medium-sized body sherds and the rim sherds of types C13-16 (where the rim thickness does not exceed 2.8 cm; for example, see fig. 9:c), there are a few instances where it occurs on the larger vessels too. Interestingly, these large vessels almost always come from the late loci, thus suggesting that comb-incised decoration is chronologically sensitive among the large vessels. This matter will be discussed further below. One should also note that bands of comb incising have been found on other rim types besides C13-16, namely rims of type C12 (eg: 6.84.188). Dornemann’s illustration of
complete closed forms belonging to type C6 (Dornemann 1979: fig. 22:7, 15; 1992: fig. 3:23), indicates that comb incising and wavy lines may be found on this kind of vessel as well.

In sum, the initial classification of the sherds into medium and large-sized vessels based on rim thicknesses is a valid and “real” discrimination, based on the evidence from the decorated body sherds, which verified the separation of the sherds into two different size categories. Thus the overall corpus of sherds with projecting ribbed and ribless rims was classified in this way before being typed among the various rim forms. However, the stance and diameters of the sherds, even within these groups, are still highly divergent. In order to account for this diversity, sub-types were created within each type, giving finer rim diameter and stance parameters. I emphasize that these size categories were artificially constructed and may not have any “real” value.

Medium-sized vessels: Rim thickness is less than 2.9 cm

C13 (fig. 9: a-g): Vessel with a short neck and a ribbed rim that projects outward. The ribbed rim is generally flat on top, or slightly rounded. The outer rim diameter measures between 10 and 42 cm. A raised collar below the rim is a distinguishing feature of this type, as it occurs on 87% of the sherds. Almost all of the other sherds are too fragmentary for us to observe this particular feature.

The original vessel of this type is either in the form of a small to medium-sized globular pot, analogous to the complete examples illustrated in Dornemann 1992: fig. 5:3-4 and Dornemann 1979: fig. 21: 4-5, or it is longer and more oval in form, as in Dornemann
1992: fig. 4:5. Unfortunately, there is no way of distinguishing these individual forms among the sherds of Area F, since few of the shoulders or bodies of the vessels have been preserved.

Quantity: 53

No. of sherds with a raised collar below the rim: 46

No. of sherds with a band of comb incising or incised wavy design: 12

No. of sherds with a piecrust ledge: 1 (found on one of the larger sherds, 5.36.742, the raised collar below the rim has been incised with the fingernail, as in the manner of a piecrust ledge decoration. One may note that the decoration co-occurs with an incised wavy line, indicating the overlap of these two attributes on a few extreme cases; see also type C17, where overlaps occur).

Distribution of Type C13 among loci:

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Sub-Types: C13a, C13b and C13c

C13a: outer rim diameter ranges between 10 and 19 cm
C13b: outer rim diameter ranges between 20 and 29 cm
C13c: outer rim diameter ranges between 30 and 42 cm

C14 (fig. 10: a-g): Vessel with a short neck and a ribless rim that projects outward. The ribless rim is generally flat on top. The outer diameter measures between 10 and 42 cm. Like type C13, the presence of a raised collar below the rim is a common feature. The original form of the vessel is thought to be identical to that of C13.

Quantity: 46

No. of sherds with a raised collar below the rim: 30

No. of sherds with a band of comb incising or incised wavy design: 6
No. of sherds with a piecrust ledge: 0

Distribution of Type C14 among loci:

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Sub-Types: C14a, C14b, and C14c
- C14a: outer rim diameter ranges between 10 and 19 cm.
- C14b: outer rim diameter ranges between 20 and 29 cm.
- C14c: outer rim diameter ranges between 30 and 42 cm.

C15 (fig. 10: h-l): Vessel with a short neck and a ribless rim that projects outward. The rim, unlike the others, which are flat on top, is rounded, with a dropped outer edge. The outer rim diameter measures between 14 and 22 cm.

Quantity: 4

No. of sherds with a raised collar below the rim: 3

No. of sherds with a band of comb incising or incised, wavy design: 1

No. of sherds with a piecrust ledge: 0

Distribution of Type C15 among loci:

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C16 (fig. 10: j-k): Vessel with a short neck and a ribless rim that projects outward. In addition, there is a slight or prominent protrusion on the inner rim edge. The rim is either flat on top or slopes downward on the inside. The outer rim diameter measures between 20 and 42 cm. Unlike types C13-15, the presence of a raised collar below the rim appears to be less of a identifying feature, as it appears on only two of the eight examples of this group. In
contrast, bands of comb incising are common, appearing on all of the rim sherds with preserved shoulders.

Quantity: 8

No. of sherds with a raised collar below the rim: 2

No. of sherds with a band of comb incising or incised wavy design: 4

No. of sherds with a piecrust ledge: 0

Distribution of Type 16 among loci:

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Sub-Types: C16a and C16b.
C16a: Outer rim diameter is between 20 and 29 cm.
C16b: Outer rim diameter is between 30 and 42 cm.

Large vessels: Rim width is greater than 2.9 cm

C17 (figs. 11: a-e, 12: a-e, 13: a-d): Vessel with a short neck and a ribbed rim that projects outward. The thickness of the rim at its widest point measures between 3.0 and 4.0 cm for this type. The outer rim diameter ranges between 22 and 60 cm. The rim is generally flat on top, or rounded slightly. Raised collars below the rim are exceptionally common in this type. Piecrust ledges make their first real appearance in this group, occurring either in the place of a raised collar, or further down on the body of the vessel. There are two examples of vessels that have bands of incised combing, but these both co-occur with the piecrust decoration, which appears on the raised collar.
The vessel of this type would have resembled a relatively squat, globular krater, like the examples illustrated in Domemann 1992: fig. 6:1, 4, or it may have been longer and more oval in form.

Quantity: 78

No. of sherds with a raised collar below the rim: 70

No. of sherds with a band of incised combing or wavy line: 2 (but co-occurring with piecrust ledges)

No. of sherds with piecrust ledge: 8

Distribution of Type C17 among loci:

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Sub-Types: C17a, C17b and C17c.
C17a: Outer rim diameter is between 20 and 39 cm
C17b: Outer rim diameter is between 40 and 60 cm
C17c: Stance is more vertical than sub-types C17a and C17b; vessel is virtually neckless. Outer rim diameter is between 40 and 60 cm.

C18 (figs. 14: a-e, 15: a-d): Vessel with a short neck and a ribbed rim that projects outward.

The thickness of the rim at its widest point measures between 4.1 and 5.5 cm for this type.

The outer rim diameter ranges between 30 and 60 cm. The rim is generally flat on top or rounded. Like the vessels of type C17, the presence of a raised collar below the rim is very common. Piecrust ledges are also fairly common.

Quantity: 44

No. of sherds with a raised collar below the rim: 40

No. of sherds with a band of comb incising or wavy design: 0
No. of sherds with a piecrust ledge: 11

Distribution of Type C18 among loci:

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Sub-Types: C18a, C18b, C18c.
C18a: Outer rim diameter is between 30 and 39 cm.
C18b: Outer rim diameter is between 40 and 60 cm.
C18c: Stance is more vertical than sub-types C18a and C18b; vessel is virtually neckless. Outer rim diameter is between 40 and 60 cm.

C19 (fig. 16: a-b): Vessel with a short neck and a lightly ribbed rim that projects outward.
Rim width ranges between 3.7 and 4.2 cm. Outer rim diameter ranges between 30 and 60 cm.
Comb incising may be frequent on this particular type, since it appears on both sherds with preserved shoulders.

Quantity: 4

No. of sherds with a raised collar below the rim: 1

No. of sherds with a band of comb incising or wavy design: 2

No. of sherds with a piecrust ledge: 1

Distribution of Type C19 among loci:

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Sub-Types: C19a and C19b.
C19a: Outer rim diameter is between 30 and 39 cm.
C19b: Outer rim diameter is between 40 and 60 cm.

C20 (fig. 16: c-d): Vessel with a short neck and a ribbed rim that projects outward. In addition, there is a slight or prominent protrusion on the inner rim edge. The rim is either flat on top or slightly sloped inward. The outer rim diameter measures about 40 cm.
Quantity: 2

No. of sherds with a raised collar below the rim: 2

No. of sherds with a band of comb incising or wavy design: 0

No. of sherds with a piecrust ledge: 1

Distribution of Type C20 among loci:

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<td>0</td>
<td>0</td>
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</table>

C21 (fig. 16: e-f): Vessel with a short neck and ribless rim that projects outward. The rim is either flat on top or rounded. The thickness of the rim is between 3.0 and 4.5 cm. The outer rim diameter measures between 26 and 50 cm. Comb incising appears to be a common feature, occurring on all but one of the examples.

Quantity: 4

No. of sherds with a raised collar below the rim: 4

No. of sherds with a band of comb incising or wavy design: 3

No. of sherds with a piecrust ledge: 0

Distribution of Type C21 among loci:

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<th>10</th>
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<td>1</td>
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<td>4</td>
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Sub-Types: C21a, C21b
C21a: Outer rim diameter ranges between 22 and 39 cm.
C21b: Outer rim diameter ranges between 40 and 60 cm.

C22 (fig. 17: a-b): Vessel with a short neck and ribless or nearly ribless rim. In addition, there is a slight or prominent protrusion on the inner rim edge. The rim is either flat on top or
slopes downward on the inside. The outer rim diameter ranges between 28 and 50 cm. Like type C21, comb incising, unlike piecrust decoration, appears to be a common feature among the sherds.

Quantity: 5

No. of sherds with a raised collar below the rim: 2

No. of sherds with a band of comb incising or wavy design: 3

No. of sherds with piecrust ledge: 0

Distribution of Type C22 among loci:

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</table>

Sub-Types: C22a, C22b, C22c
C22a: Outer rim diameter ranges between 20 and 39 cm.
C22b: Outer rim diameter ranges between 40 and 60 cm.
C22c: Stance is more vertical than sub-types C22a and C22b. Vessel is virtually neckless. Outer rim diameter ranges between 40 and 60 cm.

C23 (fig. 17: c-d): Large vessel with a thickened, vertical rim with two ribs on the outside edge. The outer rim diameter ranges between 37 and 47 cm. The vessel is probably fairly deep and globular in form. One of the sherds is decorated with a band of combing and wavy lines.

Quantity: 3

Distribution among loci:

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</table>
C24-53 (figs. 18: a-l, 19: a-h, 20: a-j): The following rims come from a variety of closed-vessel shapes and sizes. Each of the types occurs only once in the assemblage.

Particulars:

Type C24 (fig. 18:a) is the only rim sherd in the corpus of Area F with a preserved handle. Other handles have been found in the corpus, and most of them are roughly the same in thickness and length as the one in this example, suggesting the presence at Hadidi of more narrow-necked juglets(?) like the one represented here.

Type C25 (fig. 18:b) is characterized by a finely rounded and rolled rim. The vessel wall below the rim is very thin. The profile and diameter if this sherd best resembles the rims of “lentoid flasks” found at other Middle Bronze Age sites along the Euphrates River, particularly in the region around Mari (i.e., Mari: Parrot 1959: fig. 84: 117; Baghouz: du Mesnil du Buisson 1948: pl. LXXVIII: Z203).

Types C29-C31 (fig. 18: f-h) all have rounded, rolled rims, but are distinct from one another. The sherd classified as C31 has a burnished interior and the exterior is painted with thin, brown concentric circles, which also appear to be slightly burnished. The technique for producing such an effect is unknown. C30 has a larger rim and its stance is quite different than that of C29 and C31.

Type C35 (fig. 18:1), a vessel with a very simple, slightly flared rim, is covered with black smoke-staining, suggesting its function as a cooking vessel.

Quantity: 30
Open Types 01-013

01 (fig. 21: a-e): Large bowl characterized by a carination at the shoulder and a ribbed rim that is either flat or rounded on top, much like the rims of the closed forms C13-C22. The carination can be very sharp or slightly less pronounced. The outer diameter of the vessel ranges between 30 and 40 cm, except for one example that measures only 20 cm. The sherd of this particular vessel resembles a miniature version of the others.

Quantity: 15

Distribution of Type 01 among loci:

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<td>0</td>
<td>3</td>
<td>30</td>
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</table>

02 (fig. 21: f-i): Bowl characterized by a carination below the rim and a ribless rim that projects outward. This type comprises quite a variety of rims in terms of appearance and size. In three of the sherds, the vessel walls lack any visible inclusions save for angular, grit-sized pieces of quartz.

Quantity: 9

Distribution of Type 02 among loci:

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<td>9</td>
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</tbody>
</table>

Sub-Types: O2a, O2b, O2c, O2d

O2a: Bowl with a rounded, dropped rim. One of the sherds is heavily tempered with quartz.
O2b: Rim is flat and out-turned. The carination on the vessel wall is gently executed. Both sherds are heavily tempered with quartz.
O2c: Rim is thickly folded over and rounded. The carination on the vessel wall is very sharp.
O2d: Bowls belonging to this sub-type possess smaller diameters than the others. Rims are generally out-turned and flattened.

O3 (fig. 22: a-c): Bowl with a simple vertical rim. In two of the cases, the exterior of the rim is ridged. The stance of the sherds suggests that the original vessels were quite shallow. The outer diameter of the rims ranges between 20 and 35 cm.
Quantity: 9

Distribution of Type O3 among loci:

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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
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</tbody>
</table>

O4 (fig. 22: d-f): Bowl with an upright, swollen, outer rim. The large number of examples from locus 3 is rather suspicious, and one wonders if some accidental mixing occurred before the sherds were labelled. In general this kind of rim form occurs only in very early Middle Bronze contexts, as is indicated by its presence in locus 12, as well in Dornemann's MBI assemblage (Dornemann 1992: fig. 20: 1).
Quantity: 17

Distribution of Type O4 among loci:

<table>
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<td>17</td>
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</tbody>
</table>

O5 (fig. 22: g-I): Bowl with a simple rim that is either rounded and pinched on top, or slightly flattened. The outer rim diameter of the vessel ranges between 20 and 26 cm.
O6 (fig. 22: j-m): Small cup with a vertical or nearly vertical wall and in most cases, a slightly thickened rim. The outer rim diameter ranges between 10 and 20 cm, although the majority cluster between 10 and 12 cm. In general the vessel walls are thin and very fine, reflecting the skill of the manufacturer. There are a few examples with corrugated walls whose best analogies are forms common in Tell Hadidi’s EBIV assemblage (Dornemann 1979: fig. 18: 16-17). Almost all of the specimens from this group are small and fragmentary.

O7-O13 (fig. 23: a-g): The following rims come from a variety of open vessels. Each of the types only occurs once in the assemblage. All of the sherds may be described as deriving from bowls whose outer rim diameters range between 20 and 31 cm.

Quantity: 7
Bases: B1-B5

B1 (fig. 24: a-b): Small, wheel-made, low, ring bases belonging to a thin-walled vessel. The bases are thought to belong to either the small cup forms of type C1, or possibly the beakers of type O6. Very little of the bodies above the bases is preserved, and consequently the original stance of the vessel cannot be determined.

Quantity: 11

Distribution of Type B1 among loci:

<table>
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<td>0</td>
<td>11</td>
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</table>

B2 (fig. 24:c-d): Bases are characterised by low ring- or disc-bases. The diameters of the bases range from approximately 4 to 10.5 cm, and occur with a variety of vessel-wall thicknesses. According to the stance of the sherd walls above the bases, it is conceivable that these bases characterize a variety of medium-sized closed vessel-types, as well as bowls.

Quantity: 44

Distribution of Type B2 among loci:

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<td>1</td>
<td>0</td>
<td>4</td>
<td>44</td>
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</tbody>
</table>

B3 (fig. 24: e): Bases are slightly convex, and are moderately (1 cm) thick. These bases occur on medium-size to large vessels, possibly of types C12-C14, as illustrated among Dornemann’s MBIIB corpus from Area B (Dornemann 1992: fig. 4: 1 and 3; fig. 5:5).

Quantity: 50
Distribution of Type B3 among loci:

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B4 (fig. 24: f): Flat bases occurring on medium to large vessels.

Quantity: 37

Distribution of Type B4 among loci:

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B5 (fig. 24: g): Pedestal bases. These bases are characterized by splayed and slightly thickened base rims. In a few of the rims, the body has been folded over to the outside and clumsily wet-smoothed, giving the bases an unfinished appearance. Lastly, there are bases whose outer edges have been folded over and flanged, like the specimen illustrated in fig. 24: g. The diameter of the pedestal bases ranges between 11 and 25 cm, although the majority (8 bases) cluster between 11 and 13 cm. While Dornemann has not published any MB examples of vessels with pedestal bases, there are several published examples from EBIV levels at Tell Hadidi, these appearing on bowls and globular cups (Dornemann 1979: fig. 15: 30, 34). The tradition appears to have continued on into the Middle Bronze period in the Euphrates region, as is indicated by vessels with pedestal feet from level 2 at Halawa (Orthmann 1981: Taf. 49: 1-2). There is also a group of open bowls with tall pedestal bases from Baghouz (du Mesnil du Buisson 1948: pl. LXXVII: Z203, Z218), to which some of the Hadidi Area F examples may be related.

Quantity: 15
Distribution of Type B5 among loci:

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Decorated Body Sherds W1-W3

W1 (fig. 25:a): Sherds exhibiting incised wavy lines, set between bands of comb incision.

The thickness of the body sherds suggests that this decoration occurred mainly on medium-sized vessel types such as C13 and C14. See also Dornemann 1992: fig. 5:4 for complete vessel of Type C13, with incised decoration.

Quantity: 3

Distribution of Type W1 among loci:

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<td>3</td>
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W2 (fig. 25:b): Sherds with a single, thick, wavy line, not necessarily co-occurring with bands of parallel incised lines. The thickness of the sherds (mean = 1.7 cm) suggests that this decoration is associated with medium to large-sized vessel types such as C13, C14 and C17a.

See Dornemann 1992: fig. 6:1, where a W2 incised vessel of Type C17a is illustrated.

Quantity: 10

Distribution of Type W2 among loci:

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</table>
W3 (fig. 25:c-f): Bands of comb-incised, wavy lines set between bands of comb-incised, horizontal lines. The decoration mainly occurs on medium-sized vessels of Types C13 and C14. See, for example, fig. 9:c in this study, and Dornemann 1992: fig. 4:14 and 18:7, 13.

Quantity: 31

Distribution of Type W3 among loci:

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<td>0</td>
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CHAPTER III ENDNOTES

1. The excavation diary records the height of the kiln at 313.15 m above sea-level (approx. 2.15 m above datum point), while the remaining layers of gravel and ash were encountered around 311.63 m at the beginning of the American excavations in this area. This would indicate that the earlier Dutch excavations had exposed the kiln and may have penetrated into the top of the sloping, ashy fill around it.

2. The drawn sections provided in figs. 3 and 4 do not present the north and south sections of Area F in their totality. No sections are available for the east extension trench, which extends at least 8 m further to the east. Excavations in this extension trench, however, did not penetrate lower than locus 3. Note also that the south section (fig. 3) only includes the area of the deep sounding, and not the western part of the trench, where only the latest levels were exposed.

3. Dornemann's daily diary for Area F, p. 55, reports this observation regarding the earlier layers, and it is evident in the south section drawing, fig. 3.

4. This is suggested in Dornemann's 1992 treatment of Hadidi's MBI phase, to which he assigns a number of forms that originated in EBIV. See also Bourke 1993: 165, who accepts the continuation of the EBIV tradition into the MBIIA period in inland Syria.

5. Shennan 1988: 196, explains the distinction between "discrimination" and "dissection": Discrimination "presupposes the existence of a given number of known groups and is concerned with the allocation of individual items to those groups to which they belong most appropriately," whereas dissection concerns "data that are not divisible into groups which exhibit internal cohesion and external isolation: there is simply a continuous scatter of points in which no natural division can be made. Nevertheless, it may be that for some purpose we
wish to divide them up; such a more or less arbitrary division would be a dissection."

6. Silt particles measure less than .0625 mm in size and are generally invisible to the naked eye. Sand-sized particles measure between .0625 and 2.0 mm in size and can be detected with the naked eye. For size scale, see Folk (1980: 23).

7. Grit or granule-sized particles are greater than 2 mm in size (Folk 1980: 23).

8. Apparently, calcite is used widely around the world as temper for cooking vessels. For example, the present-day potters in Pakistan and the Yucatan use calcite for their cooking ware (Rye 1976: 118). The reason is that the thermal expansion of calcite is similar to that of average fired clays, and the stresses due to differential expansion of the clay matrix are minimal when the vessels are heated and cooled during use in cooking (Rye 1981: 33).

9. Quartz undergoes a crystalline inversion at 573° C, changing its molecular structure and increasing the size of its crystals. Thus, quartz would be detrimental in cooking vessels, which can be exposed to temperatures higher than this each time they are used, with the consequent danger of fracture (Rye 1981: 34).
TYPE C1 (31 sherds)

a) 8.169.651
b) 8.171.1400
c) 8.171.1401
d) 6.150.1402
e) 6.147.1403
f) 6.2.1404
g) 6.117.1406
h) 7.49.756
i) 4.63.1405
j) 4.43.1418

TYPE C2 (8 sherds)
k) 8.167.1199
l) 6.99.1198

fig. 5: Tell Hadidi Area F Assemblage: Types C1-C2
TYPE C3 (2 sherds)

a) 6.78.1119

b) 1.164.608

TYPE C4 (3 sherds)

c) 3.25.1419

d) 6.126.1121

TYPE C5 (22 sherds)

e) 1.146.1132

f) 6.88.1418

g) 6.100.1131

h) 4.61.1118

TYPE C6 (35 sherds)

i) 6.154.1086

j) 6.151.1085

k) 6.114.1072

l) 6.49.1060

m) 4.62.1049

n) 5.36.1050

fig. 6: Tell Hadidi Area F Assemblage, Types C3-C6
fig. 7: Tell Hadidi Area F Assemblage, Types C7-C10
TYPE C11 (21 sherds)

a) 6.114.360

b) 6.82.970

c) 8.70.962

d) 6.151.557

e) 6.132.976

C12a)

f) 6.124.1027

g) 6.84.188

h) 8.167.628

TYPE C12 (93 sherds)

c) 8.70.962

fig. 8: Tell Hadidi Area F Assemblage, Types C11-C12
TYPE C13 (53 sherds)

C13a)

a) 6.88.220

C13b)

c) 8.173.670

d) 6.148.1110

e) 6.124.412

C13c)

f) 6.77.1171

g) 6.81.1166

fig. 9: Tell Hadidi Area F Assemblage, Type C13
TYPE C14 (46 sherds)

C14a) 

a) 6.146.532

d) 6.91.1102

b) 6.49.1103

c) 6.155.1230

e) 6.136.1217

C14b) 

f) 6.156.579

C14c) 

g) 6.115.401

h) 6.157.593

i) 6.111.1219

TYPE C15 (4 sherds)

 TYPE C16 (8 sherds) (Late)

C16a) 

j) 3.12.801

C16b) 

k) 3.35.871

10cm

fig. 10: Tell Hadidi Area F Assemblage, Types C14-C16
fig. 11: Tell Hadidi Area F Assemblage, Type C17a
fig. 12: Tell Hadidi Area F Assemblage, Type C17b
fig. 13: Tell Hadidi Area F Assemblage, Type C17c
fig. 14: Tell Hadidi Area F Assemblage, Type C18a-b
fig. 15: Tell Hadidi Area F Assemblage, Type C18b-c
TYPE C19 (4 sherds)

- C19a) [Diagram]
  a) 6.146.531

- C19b) [Diagram]
  b) 6.139.1330

TYPE 20 (2 sherds)

- [Diagram]
  c) 3.8.798

- [Diagram]
  d) 3.31.1406

TYPE C21 (4 sherds) (Late)

- C21a) [Diagram]
  e) 6.58.825

- C21b) [Diagram]
  f) 4.62.735

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**fig. 16: Tell Hadidi Area F Assemblage, Types C19-C21**
TYPE C22 (5 sherds) (Late)

C22a)

a) 3.9.1245

C22b)

b) 3.7.793

TYPE C23 (3 sherds)

c) 6.141.499

d) 6.126.425

fig. 17: Tell Hadidi Area F Assemblage, Types C22-C23
TYPES C24-C35 (Miscellaneous, one-of-a-kind)

fig. 18: Tell Hadidi Area F Assemblage, Types C24-C35
TYPES C36-C43 (Miscellaneous, one-of-a-kind)

fig. 19: Tell Hadidi Area F Assemblage, Types C36-C43
TYPES C44-C53 (Miscellaneous, one-of-a-kind)

fig. 20: Tell Hadidi Area F Assemblage, Types C44-C53
TYPE O1 (15 sherds)

a) 12.178.945

b) 6.134.927

c) 6.71.916

d) 6.54.914

e) 3.33.899

TYPE O2 (9 sherds) (Late)

f) 6.121.951

g) 6.67.912

O2c)

h) 6.60.911

i) 3.22.898

fig. 21: Tell Hadidi Area F Assemblage, Types O1-O2
TYPE O3 (9 sherds) (Early)

a) 10.175.936

c) 6.146.924

b) 10.175.939

TYPE O4 (17 sherds) (Early)

d) 12.178.1169

f) 2.4.880
e) 6.83.901

TYPE O5 (9 sherds)

g) 6.153.929

i) 3.16.894

TYPE O6 (21 sherds) (Early)

j) 12.178

k) 10.175

l) 12.178

m) 12.178.706

fig. 22: Tell Hadidi Area F Assemblage, Types O3-O6
TYPES O7 - O13 (Miscellaneous, one-of-a-kind)

fig. 23: Tell Hadidi Area F Assemblage, Types O7-O13
TYPE B1 (11 sherds)

a) 6.95.1428

b) ??.1427

TYPE B2 (44 sherds)

c) 6.160.1424

d) 6.57.1423

TYPE B3 (50 sherds)

e) 6.139.1421

TYPE B4 (37 sherds)

f) 4.63.1422

TYPE B5 (15 sherds)

g) 6.159.1088

fig. 24: Tell Hadidi Area F Assemblage, Types B1-B5
fig. 25: Tell Hadidi Area F Assemblage, Types W1-W3
CHAPTER IV
TELL HADIDI'S MIDDLE BRONZE PERIODIZATION

IV.1  Introduction

Before devising a relative chronology for Middle Bronze Age sites along the Euphrates River on the basis of pottery homologies, the internal chronology of Tell Hadidi itself must be considered. Data on the Middle Bronze pottery from Tell Hadidi are derived from published reports containing illustrations of pottery discovered in Area B on the tell (Dornemann 1979: figs 20-23; Dornemann 1992: figs. 3-20). In addition, there is the pottery from Area F, which has been the focus of typological investigations in the previous chapter of this study. Unfortunately, Areas B and F are not linked stratigraphically and thus the site’s internal chronology and the Middle Bronze sequence of associated pottery are not a straightforward matter. One cannot rule out the possibility, for example, that the pottery from each of the areas belongs to different sub-phases within the Middle Bronze Age, and thus was used at different times. In light of the fact that the excavated areas comprise not one, but a sequence of occupation layers spanning an extended length of time, it is also conceivable that there are temporal overlaps between areas, in which some, but not all, of the pottery co-existed.

Thus, the first task of this section is to determine how the Middle Bronze Tell Hadidi ceramic assemblages from Areas F and B relate to one another, and to put the material into some kind of chronological order. The chosen starting point has been the pottery from Area F. The corpus is larger and more representative of the Hadidi assemblage than the Area B
pottery illustrated in the published reports. Furthermore, the stratigraphy of Area F is better understood than that of Area B, which is complicated and whose details are not fully published. Consequently, having understood the sequence of pottery in Area F, it should be possible to determine how the published pottery from Area B fits into this scheme.

In light of this procedure, the Middle Bronze phase designations that Dornemann had already assigned to the Area B pottery at Hadidi (1979: 141 for his use of the term “MBII” as well as figs. 20-23; 1992: figs. 3-20 for his use of “MBI”, “MBIIA” and “MBIIB”) were disregarded for the time being. Dornemann’s use of the “MBIIA” and “MBIIB” phases to describe the pottery from area B is based on pottery parallels with other sites’ material that has been arranged largely according to the Levantine chronological sequence. One should note, however, that chronological associations between the Levant (coastal Syria and Palestine) and inland Syria based on pottery parallels are few and still poorly understood. In addition, Dornemann has probably accepted the commonly-held argument that the Mari material, derived from the Palace of Zimri-Lim, and which has a fair number of contacts with the Hadidi material, is dated to the Levantine MBIIB period (Yadin 1972: 107; Gerstenblith 1983: 102; Dever 1992: 1-25). However, this popular assumption (particularly among Palestinian archaeologists), is based on spurious evidence, as will be discussed in chapter VI of this study. Finally, the sub-division of the Area B pottery into MBIIA and IIB is somewhat inconsistent with the findings in Area F, which suggests an alternative phasing for the Middle Bronze Age. In summary, Dornemann’s phase designations, as they are presented in the published reports, should be disregarded until they can be verified or rejected, based on the
evidence from Area F and a re-appraisal of the Levantine chronology as it applies to inland Syria.

Before entering into a chronological analysis, it must be acknowledged that the evidence available for this study is far from complete. Although the pottery from Tell Hadidi, particularly the sherds from Area F, have provided a data set from which to derive useful information about the Euphrates Middle Bronze Age and its evolution, there are nonetheless aspects of change and development in the pottery assemblage that could not be confirmed because of insufficient evidence. It is suspected that other developments have not surfaced at all through the course of the investigations because of the incomplete evidence. Despite these limitations, however, I feel that the material presented at this time has provided a satisfactory starting-point with which to make some general chronological conclusions concerning Hadidi’s internal development and that of the other Euphrates sites, and provides a suitable framework into which future evidence can be fitted.

Using the typology presented in the previous chapter for the Area F pottery, I will try to determine whether the material from Area F represents a long sequence with significant changes and developments over time, or whether it represents a relatively short period of time, in which few significant developments took place. This information is obviously essential for understanding whether the sequence represents a single phase in the Middle Bronze Age, or several phases, and its consequent temporal relationship with other Euphrates assemblages.
IV.2 The Ceramic Analysis: Measurements of Similarity

Chronological developments within the Area F material can be determined by observing the degree of similarity or dissimilarity among each of the superimposed loci. By measuring similarities among these loci, one can get a better indication of the nature and level of chronological developments occurring among the strata. I reason that a high measure of similarity between two loci indicates that little time has passed between them, while a high degree of difference suggests that a long chronological span exists between them. Furthermore, by using a clustering method that detects groupings of similar loci and finds others that are disparate, it may also be possible to confirm the presence of clearly defined chronological sub-phases.

Since Area F has provided a collection of rim sherds from all of the loci with the exception of loci 13 and 9, it is possible to produce similarity measurements between each of the loci with the use of the rim-sherd typology that was presented above. The measure of similarity is based on the number of matches of rim types that exists between two loci, as a proportion of the total number of types represented in both loci. Thus, two loci that contain the same or nearly the same rim types will be said to have a high degree of similarity, while loci that contain very different pottery types will be considered dissimilar. In order to facilitate the matching of rim types among each pair of loci, a table, indicating the presence or absence of each rim type within each locus has been prepared (table 2).

There are several similarity measurements based on presence/absence variables available to archaeologists at present, and I have opted for one that can deal with the limitations of the specific data set. In particular, the Area F corpus comprises variable sizes
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<tr>
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Table 2: Presence/Absence of Rim Types in Individual Loci of Area F
of loci. While some of the strata, such as locus 6, are quite large and contain a vast number of rim sherds, there are other loci with only a small number of sherds, even some with less than 10 rim sherds (loci 1 and 10). It is logical to assume that more types will be represented in locus 6 than in other loci simply because it is larger and has more sherds. This disparity can seriously affect the results of the similarity equations, as has been pointed out by scholars who have studied these measurements (Doran and Hodson 1975: 281).

Because of the variable size of the loci, the two most common similarity coefficients, known as the Simple Matching Coefficient (Doran and Hodson 1975: 140; Sokal and Sneath 1963: 133) and the Jaccard Coefficient (Shennan 1988: 203) were rejected. The former was discarded since it includes negative matches in the overall equation. Although one cannot discount the possibility that the absence of certain types within a locus signifies a chronological difference, there is also the possibility that the locus may simply not have that type because it has fewer pottery sherds, and thus fewer types represented.

Unlike the Simple Matching Coefficient, the Jaccard Coefficient does not take into consideration the number of negative matches. If two loci are the same in the sense of not possessing some particular type, this is not counted either as a match or counted in the total number of types that forms the divisor for the coefficient (Shennan 1988: 203). But the disproportionate size of the two data sets being compared is still a problem if one uses the Jaccard Coefficient. In comparing a locus that has a great number of types with one that only has a few types, the total number of matches will be small and consequently the resulting Jaccard Coefficient will be a low number. One will understand the two loci as being greatly dissimilar. Yet although the smaller locus does not have all the types present in the larger set,
of the ones it **does** possess, what if there is a perfect match with the larger set? From this point of view, the smaller locus has a perfect association with the larger data set since every one of its types is present in the larger set as well. That is a very significant observation that reflects the close as opposed to distant similarity between two loci.

**Shennan’s Coefficient.** Shennan, in his discussion of the types of similarity coefficients available to archaeologists today, has suggested the following coefficient in order to deal with cases of disparate data sets:

\[ S = \frac{1}{2}(a/a + c + a/a + b) \] (Shennan 1988: 205)

where the letters \(a-c\) refer symbolically to four possible combinations of states in the following table (Doran and Hodson 1975: 140):

<table>
<thead>
<tr>
<th>Locus x</th>
<th>Type +</th>
<th>Type -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type +</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>Type -</td>
<td>c</td>
<td>d</td>
</tr>
</tbody>
</table>

Letter \(a\) signifies the total number of pottery types that are present in both locus \(x\) and \(y\), \(b\) represents the number of types present in locus \(y\) but not in locus \(x\), and \(c\), the number of types present in locus \(x\) but not in locus \(y\). Letter \(d\) represents the number pottery types not present in either of the loci. Note that the coefficient offered by Shennan, like the Jaccard Coefficient, does not consider the significance of negative matches.

Thus, in Shennan’s equation, the positive matches between two loci, based on the co-occurrence of types, is taken as a proportion of the total number of types found within locus \(x\), and as a proportion of the total occurrences of types within locus \(y\). Then, the two are averaged by dividing their sum in half. It is clear that the less populous of the two loci
receives much more weight in this equation than with the Jaccard Coefficient, although one might argue that the action of averaging is spurious (Shennan 1988: 205).

One consideration before applying this equation was what to do with the miscellaneous types in the corpus (C24-53 and O7-13) which are each represented by only one sherd. Where there is only one occurrence of a type, it is clear that there will be no matches. Furthermore, of these 37 miscellaneous types, 23 come from locus 6. Thus any similarity coefficient between one of the loci and locus 6 will be greatly affected by this disproportionate number of one-of-a-kind types, even though there may be a great number of matches between the loci among the other types. Because of this, I have opted to disregard the miscellaneous types in the analysis of similarity among the Area F loci. 3

Shennan's similarity coefficient, as described above, was applied to the Area F rim typology, consisting of closed types C1-C23, and open types O1-O6. The resulting similarity coefficients for each pair of loci, with the exception of loci 5 and 7, whose stratigraphic positions were poorly understood, were then plotted on a matrix, illustrated in Table 3. The loci are ordered in the matrix according to their stratigraphic succession; thus locus 12 at the top of the table represents the earliest stratum, while locus 4 at the bottom represents the latest level. The number 1.0 in the matrix indicates a perfect match of types between the loci. Obviously, where a locus is compared against itself, there is a perfect match, and these results can be seen running down the top diagonal of the matrix. Anything less than a perfect match is expressed as a quantity less than 1.0. The closer the similarity coefficient is to 1.0 the greater the similarity existing between the two loci.
Loci in stratigraphic succession

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<th>11</th>
<th>10</th>
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<td>.67</td>
<td>.84</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.40</td>
<td>.33</td>
<td>0</td>
<td>.53</td>
<td>.61</td>
<td>.58</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>.30</td>
<td>.81</td>
<td>0</td>
<td>.55</td>
<td>.61</td>
<td>.61</td>
<td>.45</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>.44</td>
<td>.50</td>
<td>0</td>
<td>.69</td>
<td>.74</td>
<td>.73</td>
<td>.61</td>
<td>.69</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 3: Similarity Matrix of Pottery Types based on Shennan's Equation
The results of the table were initially puzzling. It was difficult to ascertain whether or not the similarity coefficients had any relation to the stratigraphic position of the loci. In some cases, the relationships appeared rational. For example, the stratigraphic position of locus 3 in Area F was directly above locus 6, and indeed, the resulting similarity coefficient for the two (0.84) was very high. Similarly, locus 8, which was the layer directly underneath locus 6, shared a great number of similarities with locus 6 (.74). Despite these results, however, there was an equal, if not greater number of irregularities present. For example, it was difficult to explain locus 12's high degree of similarity with locus 4 (.44) but not with loci that were stratigraphically closer to it, such as locus 10 (= .30). Likewise, if a chronological progression is represented by the loci of Area F, how does one explain the fact that in the similarity matrix, locus 10 has a greater similarity with locus 6 (.53) than with locus 8 (.29), which is supposed to lie directly above it?

The peculiar results of the matrix were made exceptionally clear when their scores were fed into a Nearest Neighbour or Single-Link Cluster Analysis (Shennan 1988: 213). In this analysis, the most similar items were first grouped together, then the next similar individuals were added onto the group or formed a separate group, and so on, at decreasing levels of similarity, until finally all of the individuals were joined in a single group. The procedure was carried out by revising and reducing the similarity matrix each time a new group was added to the existing one (see Shennan's descriptions of the procedure, 1988: 213-14). The resulting sequence of links was represented as a dendrogram, with a similarity scale down the side (fig. 26).
Fig 26: Dendrogram of results of single-link cluster analysis of the matrix of similarities between Area F loci, based on Shennan's Coefficient
The dendrogram shows clearly which loci are the most closely related, represented by the links nearest the bottom of the table, and which ones are the most divergent, represented by the links at the top. In our dendrogram, loci 6 and 3 formed the most similar group, followed by their close association with locus 4 and locus 8, and so on. The one unusual feature of the dendrogram was the link formed by loci 1 and 11, which had a very high measure of similarity among themselves, before joining with the other groups.

The results show that there is no clear relationship between the similarities among the loci and their stratigraphic positions. In contrast, what emerges is the fact that the similarity coefficients are almost directly associated with the number of types represented in each data set. So, for example, locus 6, with a total of 27 different rim types, is best associated with locus 3, which has the next highest number of rim types at 22, followed by loci 4 and 8, with the next highest number of types at 13, and so on. The second furthest link in the dendrogram is locus 10, which has the lowest number of rim types (locus 2, with a higher number of rim types than locus 10, actually forms the lowest link).

In other words, the table does not appear to reflect chronological developments among the loci at all; it merely reflects the size of the sample from each locus. Thus, Shennan’s Equation, although regarded as an improvement over the Jaccard Coefficient, has not been able to resolve the problem of the disparate sizes of the data sets.

The results of the above analyses, however, were not altogether discouraging. If we consider that the loci are perfectly proportional to one another in size, as is reflected in the Single-Link Cluster Analysis, this suggests that if all of the loci contained equal quantities of rim types, they would match up extremely well with one another. So, for example, if as many
rim types were discovered in locus 12 as in locus 6, there should be an exceptionally high measure of similarity between the two. This discovery has obvious ramifications regarding the chronology. If all of the loci are regarded as being closely similar to one another, as is argued, then the time span among the layers is quite short. Interestingly, such a conclusion would agree with the one disparate result of the Single Link Cluster Analysis, which is made up of the links formed by loci 1 and 11. These loci contain a low number of rim types and there is no reason why they should have such a high degree of similarity among them except that they occur within a fairly brief space of time.

Brainerd-Robinson's Agreement Coefficient. The overall short span of time represented by the Area F sequence can be established through the application of another type of similarity measurement. In this equation, the relative frequency of sherds within each of the types, expressed as a percentage, is considered and compared among the loci. Statisticians agree that this type of measurement is more accurate than one based on presence/absence counts, since it assesses the progression and decline of vessel types through time and accounts for sherds that occur in levels through accidents of deposition (usually represented by low frequencies):

...chronologies based on the presence or absence of types or attributes will never be as accurate as those based on relative frequencies. This is because technological and stylistic changes are rarely instantaneous in inception or momentary in duration...[In addition,] the processes affecting archaeological deposition create enough "noise" through
mixing of deposits that presence/absence records are necessarily imprecise (LeBlanc 1975: 23).

For the purposes of the current analysis, the Brainerd-Robinson agreement coefficient was chosen to measure similarities based on the relative frequency of sherds per types within each of the Area F loci. Like the previously described coefficients, this equation measures the degree of similarity between defined categories for pairs of archaeological assemblages (Doran and Hodson 1975: 139). One strength of the Brainerd-Robinson coefficient is that it is simple to calculate, consisting of the sum of the differences between percentage values of any given pair of objects for all variables.

One of the drawbacks of the coefficient is its inherent assumption that the proportions of types in each of the assemblages are accurate estimates of the proportions of these types for the entire set of ceramics to be found at that site (Wenke 1975-76: 48). Obviously such an assumption may not be correct, particularly when one is dealing with a small sample of sherds from a very limited area of excavation. Unfortunately, there is no way to get around this particular problem in the case of the Tell Hadidi collection. Although the current study is making use of every available rim sherd in the Area F assemblage, it represents only a small area of the Middle Bronze settlement and thus may not be a representative sample of the entire Tell Hadidi ceramic corpus for that time period. Consequently, I must emphasize that the results of the similarity measurements below are at best provisional until further ceramic data can be accumulated and applied to the equation.

The formula for the Brainerd-Robinson coefficient of agreement is:
where the relative abundance of each vessel type k in the assemblage of each locus i and j, is expressed as a percentage P. So for example, in comparing the assemblages of locus 11 and 1, the sum of all (absolute) differences in percentages for each type within the locus is calculated, then subtracted from 200 as shown in table 4.

\[
S = 200 - \sum_{k=1}^{n} |P_{ik} - P_{jk}|
\]

<table>
<thead>
<tr>
<th></th>
<th>C1</th>
<th>C5</th>
<th>C8</th>
<th>C12</th>
<th>C13</th>
<th>C14</th>
<th>O3</th>
<th>O6</th>
</tr>
</thead>
<tbody>
<tr>
<td>locus 11:</td>
<td>9.09%</td>
<td>9.09%</td>
<td>27.27%</td>
<td>9.09%</td>
<td>9.09%</td>
<td>9.09%</td>
<td>18.18%</td>
<td>9.09% = 100%</td>
</tr>
<tr>
<td>locus 1:</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
<td>0%    = 100%</td>
</tr>
<tr>
<td>difference</td>
<td>10.91</td>
<td>10.91</td>
<td>27.27</td>
<td>10.91</td>
<td>10.91</td>
<td>10.91</td>
<td>18.18</td>
<td>9.09</td>
</tr>
</tbody>
</table>

\[
200 - (10.91 + 10.91 + 27.27 + 10.91 + 10.91 + 10.91 + 18.18 + 9.09) = \\
200 - 109.09 = 90.91
\]

Table 4: Computation of the Brainerd-Robinson Coefficient of Agreement for Loci 11 and 1.

According to the results of the Brainerd-Robinson Coefficient as presented in table 4, the resulting similarity coefficient for loci 11 and 1 is 90.9. This figure may be expressed as a percentage, where 100% indicates a perfect similarity between the two loci and 0% indicates a total dissimilarity. Thus, the degree of similarity between locus 11 and locus 1 according to the Brainerd-Robinson agreement coefficient is 45%.

Unfortunately, the initial calculation of the similarity coefficient for each pair of loci according to the Brainerd-Robinson coefficient did not prove as useful as was hoped. Again, the reason seemed to be the small and variable size of the samples from each locus. Like Shennan’s coefficient before, the results still appear to be heavily influenced by comparable sizes of the loci.
In view of this persistent problem, a significant modification was made to the data. It consisted of grouping the pottery of individual loci into larger sets according to broader stratigraphic definitions. This resulted in a greater number of sherds and types to work with per group, and reduced the size distinctions among the assemblage.

The groups of loci were arranged as follows: the earliest loci, 12, 11, 10 and 8 formed Stratum 1; loci 6 and 3 formed Stratum 2; while the latest loci, 2, 1 and 4 formed Stratum 3. The division between Strata 1 and 2 at the point between locus 8 and 6 was made to correlate with the possible introduction of a new phase of activity in Area F around the beginning of locus 6, reflected by the construction of the potter’s kiln. Stratum 2, consisting of loci 6 and 3, represents the time in which the kiln was most heavily in operation, as suggested by the thick layers of sherd deposition and ashy material found within these loci. Stratum 3, which consists of the remaining loci, represents a time when the potter’s kiln was either out of operation or in declining use, as suggested by the small number of sherds and the less ashy composition of these strata.

Having established the three sequential strata, the frequency of sherds within each of the types as a percentage of the total number of rim sherds from the combined loci was determined (Table 5). The B-R coefficient was then calculated for sets Stratum 1/Stratum 2, Stratum 2/Stratum 3 and Stratum 1/Stratum 3. It was argued that if the similarity coefficients for each of the pairs are reasonably similar, then a short length of time is represented by the total sequence of Area F.
Table 5: Types and Frequencies of Strata 1, 2 and 3:

Stratum 1 = loci 12, 11, 10 and 8
Stratum 2 = loci 6 and 3
Stratum 3 = loci 2, 1 and 4

Figure in parenthesis (#) indicates number of sherds represented by percentage

<table>
<thead>
<tr>
<th>Stratum 1</th>
<th>Stratum 2</th>
<th>Stratum 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>C1</td>
<td>C1</td>
</tr>
<tr>
<td>11.11% (7)</td>
<td>4.26% (19)</td>
<td>7.69% (3)</td>
</tr>
<tr>
<td>1.58% (1)</td>
<td>.89% (4)</td>
<td>7.69% (3)</td>
</tr>
<tr>
<td>0%</td>
<td>.44% (2)</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>.67% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>1.58% (1)</td>
<td>4.03% (18)</td>
<td>5.12% (2)</td>
</tr>
<tr>
<td>3.17% (2)</td>
<td>6.72% (30)</td>
<td>5.12% (2)</td>
</tr>
<tr>
<td>0%</td>
<td>.67% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>6.34% (4)</td>
<td>.67% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>0%</td>
<td>2.56% (1)</td>
</tr>
<tr>
<td>C2</td>
<td>C2</td>
<td>C2</td>
</tr>
<tr>
<td>1.58% (1)</td>
<td>.44% (2)</td>
<td>0%</td>
</tr>
<tr>
<td>3.17% (2)</td>
<td>3.58% (16)</td>
<td>5.12% (2)</td>
</tr>
<tr>
<td>7.93% (5)</td>
<td>18.6% (83)</td>
<td>10.25% (4)</td>
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<tr>
<td>4.76% (3)</td>
<td>9.86% (44)</td>
<td>10.25% (4)</td>
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<tr>
<td>C3</td>
<td>C3</td>
<td>C3</td>
</tr>
<tr>
<td>6.34% (4)</td>
<td>8.29% (37)</td>
<td>12.82% (5)</td>
</tr>
<tr>
<td>0%</td>
<td>.67% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>1.58% (1)</td>
<td>.89% (4)</td>
<td>7.69% (3)</td>
</tr>
<tr>
<td>7.93% (5)</td>
<td>15.47% (69)</td>
<td>7.69% (3)</td>
</tr>
<tr>
<td>C4</td>
<td>C4</td>
<td>C4</td>
</tr>
<tr>
<td>4.76% (3)</td>
<td>8.74% (39)</td>
<td>5.12% (2)</td>
</tr>
<tr>
<td>3.17% (3)</td>
<td>.44% (2)</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>.44% (2)</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>.44% (2)</td>
<td>5.12% (2)</td>
</tr>
<tr>
<td>0%</td>
<td>.89% (4)</td>
<td>2.56% (1)</td>
</tr>
<tr>
<td>0%</td>
<td>.67% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>C5</td>
<td>C5</td>
<td>C5</td>
</tr>
<tr>
<td>0%</td>
<td>0%</td>
<td>5.12% (2)</td>
</tr>
<tr>
<td>O1</td>
<td>O1</td>
<td>O1</td>
</tr>
<tr>
<td>3.17% (2)</td>
<td>2.46% (11)</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>1.79% (8)</td>
<td>2.56% (1)</td>
</tr>
<tr>
<td>O2</td>
<td>O2</td>
<td>O2</td>
</tr>
<tr>
<td>9.52% (6)</td>
<td>.67% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>O3</td>
<td>O3</td>
<td>O3</td>
</tr>
<tr>
<td>3.17% (2)</td>
<td>3.13% (14)</td>
<td>0%</td>
</tr>
<tr>
<td>O4</td>
<td>O4</td>
<td>O4</td>
</tr>
<tr>
<td>0%</td>
<td>1.79% (8)</td>
<td>0%</td>
</tr>
<tr>
<td>O5</td>
<td>O5</td>
<td>O5</td>
</tr>
<tr>
<td>17.46% (11)</td>
<td>2.24% (10)</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total Sherds: 63  Total Sherds: 446  Total Sherds: 38
The resulting similarity coefficients are expressed as percentages in the table 6.

<table>
<thead>
<tr>
<th>Stratum 1/Stratum 2 (Early/Middle)</th>
<th>Stratum 2/Stratum 3 (Middle/Late)</th>
<th>Stratum 1/Stratum 3 (Early/Late)</th>
</tr>
</thead>
<tbody>
<tr>
<td>56%</td>
<td>65%</td>
<td>51%</td>
</tr>
</tbody>
</table>

Table 6: Computation of the B-R Coefficient of Agreement for Groups of Loci.

The results are fairly conclusive. There would appear to be very little difference between the pottery types and frequencies from the early and middle loci (56%) and the early and late loci (51%). Since no major typological developments were detected among these groups, we may conclude that the entire Area F sequence represents a short period of time, and by extension, probably only one cultural phase of the Middle Bronze Age.

IV.3 Diagnostic Vessel Categories of the Area F Assemblage.

Having established that the Area F sequence at Tell Hadidi represents a short period of time, it is necessary to establish which pottery categories best characterize the Hadidi assemblage. These will function as the means by which the relative date of other Middle Bronze ceramic assemblages from the Euphrates Valley will be determined.

In order to establish which rim types best categorize the Area F sequence, one can refer to the frequency tables for individual types (see section III.4, Typology), the table listing the presence/absence of rim types in individual loci (table 2) and the table of frequencies given for each vessel type in Stratum 1 (early), Stratum 2 (middle), and Stratum 3 (late), as was devised for the calculation of the Brainerd-Robinson coefficient of agreement above (see table 5). I argue that rim-types that comprise frequent examples in Area F (15 or more sherds), rim-types that span all or most of the Area F sequence, in combination with rim-types with
high or the highest frequencies in the central stratum 2 (loci 6 and 3), are best representative of Area F. Rim types matching this description are: C1 (31 sherds), C5 (22 sherds), C6 (35 sherds), C11 (21 sherds), C12 (93 sherds), C13 (53 sherds), C14 (46 sherds), C17 (78 sherds), C18 (44 sherds) and O1 (15 sherds).

These ten types are considered the best chronological representatives of the Area F assemblage, and later, will help form the matrix against which other sites' assemblages will be relatively dated.

A few observations can be made about this set of rim-types. For one, there is the prominence of types featuring ribbed rims. Projecting, ribbed rims are characteristic of types C13, C17, C18 and O1. Combined, their total number equals 190 sherds, well over one-third of the sherds comprising the types in the list above. Thus if there is any distinguishing feature of Area F, it is the presence of ribbed rims on an assortment of closed and open vessel forms.

Projecting ribless rims are also found throughout the Area F sequence, as is indicated by the rim sherds of C14. One should note, however, that C14 only represents medium-sized closed vessels. Projecting ribless rims from the larger closed forms do not seem to make their appearance until later in the sequence.

Next, early and late sherd types may be identified. Even though the Area F pottery is thought to represent a reasonably short period of time, there are nonetheless some indications of a development in the pottery through the loci. The presence of "early" and "late" pottery forms was not considered problematic since they are represented by only a small quantity of sherds. Furthermore, one should keep in mind that ceramic assemblages are forever in a state of evolution. At any given time, a pottery assemblage will contain vessel-
forms that are nearing the end of their existence, as well as new forms that will probably gain prominence in later times. In any event, it was the presence of these slight chronological developments in the Area F assemblage that made it possible to pinpoint the phase of the Middle Bronze Age that best suits the Area F sequence.

**Early Types.** Sherd types whose highest frequencies are in Stratum 1, followed by a dramatic decrease in frequency in the subsequent Strata 2 or 3, as shown in Table 5, are thought best to represent early vessel types. Rim types matching this description are Types C8, C10, C15, C19, O3, O4, O6. Significantly, several of these types have good parallels with assemblages from other sites that have been dated to either the EBIV period, or the early part of the Middle Bronze Age.

Type C8 represents vessels with inwardly projecting, thickened rims on forms resembling hole-mouth jars. This vessel-type was particularly prominent in locus 11, the second-earliest stratum in Area F. A further example of this rim type is illustrated in Dornemann’s collection of “MBI” pottery from Area B (Dornemann 1992: fig. 20:23). It is not present in either the “MBIIA” or “MBIIB” assemblages in Area B, suggesting that the type was popular only at the very beginning of the Middle Bronze Age levels at Tell Hadidi. One may find other analogies to this rim form in EBIV assemblages of the Euphrates region, notably from Area M at Hadidi (Dornemann 1979: fig. 19:1), and at Tell Bi’a (Strommenger et al. 1987: Abb. 15:6 and Einwag 1993: fig. 10:20-26). It also appears among the EBIV/MB “transitional” pottery from Tell Kabir (Porter 1995: fig. 9:8).

Although the vessel characterized by the Type C10 is represented by only three sherds in the Area F assemblage, it is quite prominent elsewhere at Hadidi and among other
Euphrates assemblages. For example, the rim form is present in Dornemann's “MBIIA” phase of Area Bat Tell Hadidi (Dornemann 1992: fig. 17:16-18 and 18: 1-3) although it is absent in his somewhat more developed “MBIIB” phase. It also occurs at Tell Bi'a, in what is probably an early MB phase (Einwag 1993: Abb. 6:19, 23), as well as at Mari in level 3 of Chantier A (Lebeau 1983: fig. 5:6). There are earlier occurrences of this vessel form as well; namely at Halawa in a grave of the EBIV (Orthmann 1981: Taf. 54:12), and Sweyhat (from R.O.M. collection), that may be regarded as either late EBIV or early Middle Bronze in date. Moreover, it appears in the period III assemblage at Kurban Hoyük, which is dated to the EB-MB transitional period (Algaze 1990: pl. 106: A-B), as well as the EBIV/MB “transitional” levels at Tell Kabir (Porter 1995: fig. 9:10, 12).

Type O3 represents a bowl form characterized by a vertical rim, that is either plain or ridged. The prominence of the rim in both locus 11, where 2 sherds were found, and in locus 10, where it represents 4 out of 8 sherds, reflects the early popularity of this vessel in the Area F sequence. Like Type C8, rim sherds of type O3 are illustrated in Dornemann's MBI phase for Area B (Dornemann 1992: fig. 20:3), but do not appear in the later phases. Vertical rimmed bowls are exceedingly popular in the EBIV period among the Euphrates sites, as is indicated by their frequency in EBIV levels and tombs at Tell Hadidi (Dornemann 1979: fig. 15: 18-30), Habuba Kabira (Heinrich et al. 1970: Abb. 12: e-f), Halawa (Orthmann 1981: Taf. 54:1-3; 55:1-5; 64:17-36; 65:45-48, 53-59 and Orthmann 1989: Abb. 24:1-2, 4), the Hypogeum at Til Barsib (Jamieson 1991, fig. 4:13) and Tell Bi'a (Strommenger et al. 1987: Abb. 13:1, 5; 14:7-12; 24:9-12; Einwag 1993: Abb. 10:15-19). They are also present in the EB-MB transitional period III at Kurban Höyük (Algaze 1990: pl. 99: A-B).
Type O4 characterizes a bowl with a thickened or swollen rim. It appears to have persisted longer into the Middle Bronze than the three preceding rim types. This is indicated by its prominence in locus 3, where 10 sherds have been found, as well as one example from locus 2. Nonetheless, its popularity in the early stages of the Middle Bronze Age is suggested by its appearance in locus 12 of Area F. Late EBIV examples of this bowl type are numerous; particularly at Hadidi (Dornemann 1979: fig. 12:23-27; fig. 18:10), Halawa (Orthmann 1981: Taf. 54:7-9; and 1989: Abb. 24:5), the Hypogeum at Til Barsib (Jamieson 1991, fig. 4:11) and Tell Bi’a (Strommenger et al. 1987: Abb. 15: 2-4; Einwag 1993: Abb. 10:9-10). It is also abundant in Kurban Höyük’s Period III EB-MB transitional level (Algaze 1990, pl. 99: O-R; pl. 100: F-M).

The cup or goblet form represented by rims of type O6 is most diagnostic of the early part of the Area F sequence. This is indicated by its prominence in the early loci. Of its 21 examples, 20 sherds occur in locus 6 or earlier. Particularly striking are its quantities in locus 12 (5 sherds) and in locus 10 (4 sherds). Such a vessel is also popular in the early “MBI” phase in Area B (Dornemann 1992: fig. 20:4-7). In general, however, Type O6 is indicative of the EBIV period, where it is known throughout Syria. It is in fact considered the hallmark of the EBIV “caliciform” culture (Mazzoni 1985a: 10). This culture is concentrated in the “central” (between Homs and Ebla) and “northern” (between Ebla and the Euphrates) parts of Syria, although its influence spread into Palestine and Turkey. In general, it is distinguished by the prevalence of corrugated and painted goblets like those represented by rim type O6 and often referred to as “Hama beakers” because of their prevalence in period J levels of the Orontes site of Hama (Fugmann 1958: 49-81). In
particular, simple or corrugated goblets appear to be most common in the Euphrates region of Syria, while the painted varieties become more common as one travels to the west and south (Mazzoni 1985a: 14). Strommenger's list of the EBIV occurrences of caliciform or "Hama" beakers in Syria and elsewhere (Heinrich et al. 1970: 79-81), may be updated with further examples from sites in the Euphrates region, which include Tell Hadidi (Dornemann 1979: fig. 12:28-41, where there are goblet bases; figs. 15:1-3; 16:4, 7; 17: 6-21; 18: 11-45, with bases); Habuba Kabira (Heinrich et al. 1970: Abb. 10:a); Halawa (Orthmann 1981: Taf. 54:16-17, 19; 55: 6-8; 65: 64-65; 1989: Abb. 24:7-11); Sweyhat (Holland 1976: fig. 9:13-19); the Hypogeum at Til Barsib (Jamieson 1991, fig. 4:12) and Tell Bi'a (Strommenger et al. 1987: Abb. 14: 1-5; Abb. 24: Grab 8:3-5; Einwag 1993: Abb. 10: 1-7). It also appears in the EB/MB transitional level at Kurban Höyük (Algaze 1990, pl. 97: G-S). To date, there is no evidence that the goblet form penetrated along the Euphrates below Tell Bi’a during any period. It should be noted that, of all the Euphrates examples listed, not one of them is painted. All have corrugated or plain, undecorated vessel walls. The majority have slightly thickened or "beaded" rims. The rim sherds from Area F seem to conform with this evidence. Of the 21 sherds, 13 have simple, plain bodies, while the remainder are either corrugated or lightly comb-incised. None bear any added colour, except possibly one that has traces of black staining occurring in strips on the shoulder. It is unclear, however, whether the effect was caused by paint or merely smoke-staining.

Late Types. Generally fewer vessel types characterize the late part of the Area F sequence. Rim types that occur with highest frequencies in Group 3, consequent to a dramatic rise in frequency in the previous groups, as shown in Table 5, are considered to
represent late types. The rim types that match this description are C2, C16, C21, C22 and O2.

The positive identification of rim types falling into the later part of the Area F sequence was more tentative than those dated to its early part. The main reason was the low numbers of sherds representing the “late” types. For example, C21 comprises only 4 sherds while C22 comprises 5 sherds. Nonetheless, some of these groups appear to have good parallels with vessels from other Euphrates assemblages that are dated to either the end of the Middle Bronze sequence or the beginning of the Late Bronze Age.

Two of the groups, Types C16 and C22, share a distinctive attribute, a protrusion on the inner rim edge. The protrusion is either a kind of swelling on the inside edge (e.g. C22b: fig. 17b), or a pronounced ledge, causing the rim to extend, like an umbrella, over the vessel wall (e.g. C16a: fig. 10:j). The only difference between the two groups is their size; C16’s rim widths are 2.9 cm or less, while C22’s rim widths are greater than 2.9 cm, and the later vessels generally have thicker vessel walls and larger rim diameters.

A large number of sherds among types C16 and C22 are also distinguished by comb-incised decoration on the shoulder. As was discussed earlier, this is not particularly uncommon among the medium-sized closed vessels (see p. 102) but, among the larger pots, it is extremely rare. One may note the occurrence of comb incision on seven of the sherds from these groups, of which three come from the large vessel group C22. Consequently, the presence of comb decoration on large vessels may also be a late development. Confirmation for this is suggested by the other vessel type, C21 (4 sherds). This large vessel has a ribless rim with no inner protrusion, but it is interesting to note that, on three of its four sherds, there
is a comb-incised pattern on the shoulder. Furthermore, all of these sherds derive from locus 6 or later.

It would appear, therefore, that among Groups C16, C21 and C22 two attributes that are indicative of the late part of the Area F sequence have been isolated. They are: a) the presence of an inner rim protrusion or ledge, and b) comb-incised decoration on large closed vessels (with rim widths greater than 2.9 cm). One may note that these developments were not really confirmed until rim types with low numbers of sherds were grouped together, either on the basis of one specific rim attribute that they shared, regardless of their size, or a shared body decoration.

Closed vessels with interior ledge rims are not present in either of Dornemann's MBIIA or MBIIB pottery groups from Area B, published in his 1992 report. Nor would it appear that any of the large vessels have comb-incised patterns on their shoulders. If one turns to Dornemann's 1979 report, however, one finds illustrated vessels with both attributes. Vessels with interior rim ledges (Dornemann 1979: fig. 21:30, 32-37) are said to come from the initial MBII floors of level D in Area B (Dornemann 1979: 138), while an example of a large, closed, ribless, rimmed vessel with comb-incised decoration on its shoulder (Dornemann 1979: fig. 23:33) comes from the highest floors of phase D in Area B (Dornemann 1979: 138). One may note that all of these so-called "phase D" floors overlie the pebble floors with the MBIIA and B pottery illustrated in the 1992 report,6 and thus most of the pottery found associated with them must have been deposited at a later date. This is rather confusing, since Dornemann has assigned an MBIIB date to pottery in both reports (Dornemann 1992: 83-84). Similarly, one must disregard his designation of early, intermediate
and late sub-phases (Dornemann 1979: 138), reported in the earlier 1979 report, in light of his revised 1992 chronological scheme, which presents even earlier pottery.

There is a strong appearance of vessels with interior ledge rims at the very beginning of the Late Bronze Age at Hadidi. This is indicated by the material from Area HXIII, located on the western side of the tell south of the “Tablet Building” of Area H (Dornemann 1981: 30). Apparently the paved area of HXIII was cut by the foundation trench of the Tablet Building and therefore must pre-date this structure (Dornemann 1981: 41 and fig. 11). Closed vessels with interior ledges found associated with this paved area are illustrated in Dornemann’s 1981 report (Dornemann 1981: fig. 14:21, 15:3-5). In addition, one may note the presence on one of these vessels of a band of comb-incising on its shoulder (Dornemann 1981: fig. 15:5). Dornemann dates the HXIII assemblage to the second half of the 16th century B.C. and LBIA (Dornemann 1981: 42). Other cases of vessels with interior ledge rims occur in tomb groups reported in Dornemann’s earlier report (Dornemann 1979: fig. 19:16). The pottery from these tombs is said to resemble closely the early Late Bronze Age pottery from HXIII (Dornemann 1981: 41), and thus is probably roughly contemporary with that material.

Interior ledge rims are present on vessels found in Late Bronze contexts at the site of el-Qitar (Culican and McClellan 1983-84: fig. 5:D, 6:9 [on a bowl form!], 7:A; McClellan 1986: fig. 11:3), albeit they occur on often radically different vessel bodies. It is unfortunate that none of the large, closed vessels from Area Y F/H-38 were illustrated. The pottery from this area (designated Groups B-D, illustrated in McClellan 1986: figs. 7-9) is said to date to the latter part of the Middle Bronze or the early Late Bronze Age, owing to strong parallels
with Hadidi's advanced MB levels and HXIII (McClellan 1986: 105). We suspect that a great number of the large vessels would feature the attributes discussed above.

Finally there is the material from Tell Mumbaqt. A variety of vessels from the "Aussenstadt" settlement dated to the Late Bronze Age are characterized by interior ledge rims (de Feyter 1989: figs. 5: 5-9; 8:2) as well as Late Bronze pottery from the "Kuppe" (quadrant 29/37, Frank et al. 1982: Abb. 22: 3rd row).

One other bowl-rim type, O2, is associated with the later part of the Area F sequence, but it seems to reflect a somewhat less significant development. Type O2 consists of a bowl-like vessel with a ribless rim and carination below the rim. Eight examples of the rim form have been discovered, of which seven come from locus 6, one from locus 3 and one from locus 2. In Area B, Dornemann notes that while ribbed-rim bowls occur in early examples, the plain or ribless varieties are most common in the latest layers (Dornemann 1979: 138-39). This certainly seems to be the case in Area F, where bowls with ribbed rims occur as early as locus 12 (O1), while the ribless variety does not appear until locus 6. Good parallels to the Area F rims occur in the advanced levels of MB in Area B (Dornemann 1979: figs. 20:43, 22:12, 23:12), but they appear in earlier MB levels as well (Dornemann 1992: fig. 3:7). Late Bronze Age examples of this type of bowl form from the Euphrates region are exceedingly rare.

IV.4 Date of the Area F Pottery.

It has been established that the pottery corpus derived from Area F represents a relatively brief span of time in the Middle Bronze Age, based on the consistent degree of
similarity between the latest and earliest loci. This was confirmed through the application of two different measurements of similarity. In addition, it was possible to identify a small number of pottery types that represent either “early” or “late” vessels within the sequence. Significantly, a comparative study of pottery from other areas within Tell Hadidi as well as other Euphrates sites showed that the early types had a large number of analogies with pottery from the EBIV period, while the late types compared, to a far lesser extent, with pottery from developed MB or early LB periods. In terms of numbers, there were at least five rim types with a total of 56 sherds with clear analogies to the EBIV period, as opposed to three types with a total of 17 sherds that parallel pottery dating to either the end of the Middle Bronze or the beginning of the Late Bronze Age. Based on this information, which indicates that the assemblage has more early as opposed to late connections, I am inclined to fit the Area F sequence into the first half of the Middle Bronze Age, into what can be designated as the “MBIIA” phase. Although some might consider the phase designation “MBI” to be a more appropriate definition for the assemblage, I have avoided using it because of past confusion among Near Eastern archaeologists about the real meaning of “MBI”. Some assemblages that have been called “MBI” are really “EBIV” or EB-MB “transitional” in nature. Included among these is the “MBI” assemblage from the earliest levels of Area B at Hadidi, which could appropriately be called EB/MB transitional because of the large number of EBIV forms included in it. In contrast, the Area F sequence at Tell Hadidi is characterized by a fully developed Middle Bronze assemblage, albeit one with greater ties to the Early as opposed to the Late Bronze Age.
IV.5  **Relative Date of Area B, Tell Hadidi**

Having estimated the date and duration of Area F, one may now consider its relationship with Area B, the other documented Middle Bronze context at the site whose pottery is illustrated in Dornemann's 1979 report and his 1992 article. While a quick perusal of the pottery makes it generally apparent that the two areas have similarities, their specific chronological position relative to one another can be established by finding correlations among a large association of types within each of their assemblages. In this regard, parallels with the ten rim types that were considered most representative of the Area F sequence, in addition to similarities in the proportions of early and late types, will be used as a basis for establishing the contemporaneity of Area B. I argue that if the Area B assemblages match well with these vessel types, then they probably co-existed with Area F, while those with a low degree of similarity were not contemporary. Subsequent to this analysis, Area F's diagnostic rim types will provide the initial matrix for establishing a relative chronology for all of the Middle Bronze settlements in the Euphrates region, with further additions and refinements to be provided by the Area B pottery.

A cross-dating scheme involving correlations among a large number of vessel types is more reliable than one in which only one or two diagnostic types are examined and compared, particularly in light of working with presence/absence variables rather than quantitative data. The reasoning is that one or two vessel types may have long life-spans and appear in two separate assemblages even when the contexts of these assemblages are not contemporary. One assemblage, for example, may represent a time period when the vessel was first introduced, while the other assemblage existed at the end of the vessel's period of
manufacture and use, or even when it existed as an heirloom. On the other hand, several vessel types, all characterized by varying life cycles with different dates of inception and duration, will overlap and co-exist only within a considerably shorter period of time.

The other reason for not establishing relative dates based on only a few diagnostic categories is related to the character of the two contexts under investigation. A particular occupation area may have functioned in a way such that a certain vessel type was not required or used there, even though the vessel was popular elsewhere on the site. In these cases, the absence or presence of a vessel type obviously has nothing to do with chronological developments; rather it reflects the individual functions of the ancient contexts. Again, the problem is somewhat alleviated when one attempts to compare sites based on a large number of vessel categories, since it is less likely that all of the vessels would have been used exclusively in one type of context or another.

The choice was made not to pursue a chronological analysis of pottery assemblages involving the formulation of similarity coefficients such as were devised for the loci of Area F. In such analyses, the degree of similarity is marked by the total number of shared attributes among the groups under comparison, taken as a proportion of the total number of attributes, both similar and dissimilar, present within each of them. Obviously, the number of disparate elements within pottery groups from the same site or among sites from the same geographic region will be relatively lower if the assemblages are contemporary, but as the distance between sites becomes greater, the number of disparate elements between the assemblages may increase significantly. This growing diversity is not necessarily a reflection of chronological differences; it can relate to geographical distance or the growing influence of
separate political/cultural spheres upon the material assemblages of the sites in question. The resulting similarity coefficients among such sites, therefore, will be low, even when the sites were occupied at the same time. In contrast, the chronological evaluation that has been devised above emphasizes only the similarities among sites. The number and proportion of divergent attributes within their assemblages are not considered and thus carry no chronological authority. Indeed, it is only when one enters into a discussion of inter-settlement relationships and inquiries into distinct cultural and political entities that the question of pottery diversity becomes relevant.

Table 7 lists the ten representative rim types of Area F in the left column, while the other columns list each of the individual Middle Bronze phases of Area B as assigned by Dornemann and references to matching pottery illustrations for each of the types, if they exist. Although Dornemann's phase designations are not altogether accepted, as was discussed earlier, one cannot reject the order of phases, since they obviously relate to the stratigraphic sequence of Area B. In this regard, it is important to restate that all of the MBII material reported in the 1979 AASOR publication consists of pottery that is later than the MBIIB pottery illustrated in the 1992 publication. This later pottery was in turn divided into "early" "intermediate" and "late" forms according to the consecutive floors with which they were associated (Dornemann 1979: 138)
<table>
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<tbody>
<tr>
<td>C1</td>
<td>absent</td>
<td>fig. 15: 8-11</td>
<td>fig. 3: 10-11</td>
<td>fig. 20: 45-47 (early); 22:20 (interm.)</td>
</tr>
<tr>
<td>C5</td>
<td>absent</td>
<td>fig. 17: 12, 14</td>
<td>fig. 4: 7-8</td>
<td>fig. 22: 35 (interm.)</td>
</tr>
<tr>
<td>C6</td>
<td>fig. 20: 9-10</td>
<td>fig. 16: 14-16</td>
<td>fig. 3: 23, 25-30</td>
<td>fig. 22: 7-8, 10 (early); 23:6 (interm.); 23: 40-42 (late)</td>
</tr>
<tr>
<td>C11</td>
<td>fig. 20: 12 (?)</td>
<td>fig. 17: 10-11*</td>
<td>fig. 3: 18 (?)</td>
<td>fig. 21: 19, 23, 28 (early); 22:37 (interm.); 23: 30 (late)</td>
</tr>
<tr>
<td>C12</td>
<td>fig. 20: 13-14</td>
<td>fig. 17: 4-9</td>
<td>fig. 4: 9-10</td>
<td>fig. 21: 21 (early); 22: 38 (interm.)</td>
</tr>
<tr>
<td>C13</td>
<td>absent</td>
<td>fig. 18: 7-13</td>
<td>fig. 4: 5, 12-15, fig. 5: 1-6</td>
<td>fig. 21: 5, 31 (early); 22: 25-27 (interm.); 23: 24 (late)</td>
</tr>
<tr>
<td>C14</td>
<td>absent</td>
<td>fig. 15: 17-19</td>
<td>fig. 4: 2</td>
<td>fig. 21: 1, 4, 25 (early); 23: 8 (interm.); 23: 20-21, 23 (late)</td>
</tr>
<tr>
<td>C17</td>
<td>absent</td>
<td>fig. 18: 14, fig. 19: 1-3</td>
<td>fig. 5: 8, 10; fig. 6: 1, 3</td>
<td>fig. 23: 2 (interm.)</td>
</tr>
<tr>
<td>C18</td>
<td>absent</td>
<td>fig. 19: 4-6</td>
<td>fig. 5: 11; fig. 6: 2-3, 5</td>
<td>fig. 22: 5 (early)</td>
</tr>
<tr>
<td>O1</td>
<td>fig. 20: 20-21</td>
<td>fig. 15: 25-26, 28-19; fig. 16: 1, 4</td>
<td>fig. 3: 7</td>
<td>fig. 22: 17-18, 22 (interm.); 23: 15 (late)</td>
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</table>

Table 7: The Presence/Absence of Area F’s Diagnostic Categories in Area B, Tell Hadidi

The table indicates the presence or absence of each of the types in the Middle Bronze phases assigned to the pottery of Area B. It is clear that while not all of the types are present in Area B’s MBI phase, the consequent phases indicate a perfect attendance of the ten types that are representative of Area F. Thus, Dormann’s MBIIA, MBIIB and MBII pottery assemblages from Area B appear to be contemporary with the Area F pottery, while the MBI pottery is not; it probably represents a somewhat earlier stage of the period.
As was noted above, the MBII pottery from Dornemann’s 1979 report is supposed to represent later levels of occupation than the MBIIB pottery from the 1992 report. The table has demonstrated, however, that all ten types are accounted for in this later collection of sherds. Indeed, Dornemann himself claims a close temporal relationship between the 1979 and 1992 illustrated pottery, as is shown by his grouping together of this material in his description of what he considers to be typical Middle Bronze vessel types (Dornemann 1992: 79-80), and his dating of both groups to a single phase, MBIIB (Dornemann 1992: 79-80, and 83-84).

Despite these claims, however, the 1979 published pottery shows features that distinguish it from the 1992 published MBIIB pottery and the pottery from Area F. For one, there is the prevalence of rim types that Dornemann describes as occurring “late” in the Area B assemblage, owing to their appearance only at the end of the that area’s sequence. In particular, one may note the rather prominent appearance of large vessels with interior ledge rims (Area F’s Type C22; Dornemann 1979: fig. 21: 30, 32-34, 36-37). In conjunction with this is the significant reduction in the number of large vessels with regular ribbed rims (Dornemann 1979: fig. 22:5; 23:2), which are so representative of both the Area F and earlier Area B assemblages. In addition, there is the presence of large vessels with comb-incised decoration (Dornemann 1979: fig. 23: 33). In the Area F assemblage this feature is rare and is restricted to the later part of the sequence (Types C21-C22). One can also note, significantly, that neither interior ledge rims nor large vessels with combed decoration are featured at all in the MBIIB corpus from the 1992 report of Area B. Although examples of
these types probably were found, the author did not deem their presence significant enough to merit their publication with the other forms.

The other major feature of the 1979 published pottery is a completely new vessel type that does not appear in either Area F or in the 1992 Area B corpus. The vessel form is globular, and has a simple straight-sided or flared rim. It first appears in the “intermediate” stage (Dornemann 1979: fig. 22: 23-24; 23: 4) and grows in popularity in the “late” stage (Dornemann 1979: fig. 23: 25, 43-46). Dornemann himself calls attention to this late type, and indicates that it becomes even more common in the Late Bronze layers at Tell Hadidi (Dornemann 1979: 139). For example, several incidents of this vessel type are documented among the early Late Bronze Age pottery from Area H XIII (Dornemann 1981: fig. 16).

Because of the strong appearance of a new vessel form, in addition to the prominence of “late” pottery types, I argue that the 1979 pottery represents a somewhat more developed phase than the other groups of illustrated pottery. However I hesitate to assign the bulk of the illustrated assemblage, which constitutes pottery from the “early” and “intermediate” floors, to a completely new phase since it still comprises all ten diagnostic types. In light of this, a transitional phase designation seems to be the most appropriate way of defining the “early” and “intermediate” pottery of the 1979 AASOR report. The remainder of the illustrated pottery, which is said to derive from the latest floors of Area B, does not feature all of Area F’s diagnostic categories (absent are types C2, C12, C17 and C18). Consequently it seems appropriate to assign this last group of pottery to a new phase of the Middle Bronze Age, designated here as MBIIB.
Thus, based on the study of the Tell Hadidi Middle Bronze assemblages, the pottery sequence should be arranged as follows:

<table>
<thead>
<tr>
<th>Dornemann’s phases</th>
<th>Revised Chronology</th>
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<tr>
<td>1992 Area B MBI</td>
<td>MBI (or EBIV/MB transitional)</td>
</tr>
<tr>
<td>1992 Area B MBIIA</td>
<td>=Area F= Early MBIIA</td>
</tr>
<tr>
<td>1992 Area B MBIIB</td>
<td>=Area F= Late MBIIA</td>
</tr>
<tr>
<td>1979 Area B MBII</td>
<td>(early and intermediate floors)²</td>
</tr>
<tr>
<td>1979 Area B MBII</td>
<td>(late floors)</td>
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</table>

No change is made to Dornemann’s MBI phase, represented by pottery from the earliest Middle Bronze occupation in Area B. The pottery types show a great deal of associations with both the earlier EBIV period as well as a few of the features of the Middle Bronze Age that will become prevalent in successive phases. In this way, the phase can perhaps be designated as a transitional level. One may note, for example, the early appearance of open, bowl-like forms with carinations and ribbed rims (Dornemann 1992: fig. 20: 20-21), but closed vessels with ribbed rims, the hallmark of the developed Middle Bronze at Hadidi, have not yet appeared in this early phase.

Dornemann’s 1992 MBIIA and MBIIB phases have been grouped together in the revised chronology to form a single phase: MBIIA. This is not to deny, however, that differences between Dornemann’s original groups do exist. Indeed, it is possible to follow in the 1992 report, for example, that the rims of vessels from his original “MBIIB” phase tend
to have freer profiles and more evenly modelled curves, while the earlier "MBIIA" forms are more "block-like than later, the angles and curves more restricted, and the ribs and depressions create minimal relief" (Dornemann 1992: 84). The best illustrated example of this development is shown in the difference between closed vessels of type C13 from Dornemann's MBIIA (1992: fig. 18: 7-13), and the vessels of the same size and function from MBIIB (1992: fig. 5: 1, 3 and 6). Generally the rims are more graceful and finely ribbed in the latter examples.

Yet despite these subtle differences, which probably reflect the potters' increasing confidence in their medium over time, the assemblages are essentially the same. The same vessel forms continued to exist from "MBIIA" to "MBIIB" except that some of the residual EBIV material has disappeared (notably rims analogous to Types C8, C10, O3, O4 and O6 from Area F), and the latter phase sees the introduction of no new vessels. In summary, I believe that the similarities among these groups of pottery outweigh their differences, and a change from one phase of the Middle Bronze to another at this juncture is unnecessary.

The pottery corpus of Area F conforms with this general outlook. The same ten types that are considered representative of Area F, since they occur throughout the short sequence, are exemplified in both Dornemann's 1992 MBIIA and MBIIB phases. One may also note that, in contrast to Area B, where subtle refinements are observed in the pottery production techniques over time, technical developments in the pottery are not clearly related to the consecutive loci of Area F. For example, there is an example of a finely made vessel of type C13 from locus 6, and yet from the same locus are other more block-like examples of the same vessel type, some of which show ribs that have only minimal relief. Indeed these
latter types continue to persevere in significant quantities even in the loci after locus 6. Because of these factors, it was virtually impossible to divide the Area F sequence into two separate phases as had been done with Area B. However, given that the developments observed in the Area B prove to be legitimate, I suggest that the phase that I have designated MBIIA may be characterized by an early and late sub-phase.

In the revised chronological scheme, the transitional phase from MBIIA to MBIIB is marked mainly by the appearance of new vessel types. The transition is reflected in the "early" and "intermediate" pottery from the 1979 report, which documents in particular the arrival of the closed, flared-rim vessel as noted above (Dornemann 1979: fig. 23: 44-46). One can also point to the existence of medium and large vessels with inwardly projecting rims and large vessels with bands of comb incising. Other new vessel types seem to arrive at this time. For example, open bowls with rims thickened on the interior seem to make their first appearance (Dornemann 1979: fig. 20: 38, 22:13), as do large, krater-like vessels with flanged rims (Dornemann 1979: fig. 23:3 and 27).

This revised chronology for the Tell Hadidi material, in which significant changes in the typology are taken as the criterion for introducing a new phase in the periodization, generally conforms with other archaeologists' chronological schemes, particularly those based on the developments in the artifactual evidence and not on historical events or absolute dates. The transition from MBIIA to MBIIB, originally devised in Palestine, for example, was based on the appearance of either completely new vessel forms or significant changes in the features of existing vessels (Amiran 1970: 94, and pl. 27). One finds these criteria repeated in more recent refinements of the Palestinian Middle Bronze chronology. For example, Dan Cole's
distinction between the MBIIA and MBIIIB phases at the Palestinian site of Shechem is mainly based on the appearance of new types of vessels or elaborations, by way of rim modifications or carinations, of existing vessels (Cole 1984: 81-83). Similarly, Claire Epstein, in her discussion of the Middle Bronze tombs at Kefar Szold and Ginosar, separates the tombs’ pottery into MBIIA and MBIIIB on the basis of complete changes in existing vessel forms and the appearance of new forms (Epstein 1974: 3-6). Significantly, one can further note that she has designated some of the tombs as MBIIA/B transitional (Kfar Szold, Ginosar Tombs 1 and 4), based on the presence of vessels that possess features characteristic of both MBIIA and MBIIIB. Similarly, the 1979 Area B pottery from Tell Hadidi is designated as representing a transitional stage, since the new “MBIIIB” forms have been introduced, but the older “MBIIA” forms have not yet disappeared.

CHAPTER IV ENDNOTES

1. The pottery from Ebla and the Orontes sites (i.e. Hama and Qatna), which has several close contacts with the Middle Bronze Euphrates pottery assemblages, also needs to be effectively correlated with the pottery assemblages from Palestine and the Syrian coastal sites such as Ugarit and Byblos. Up until now, chronological relationships have been based on limited pottery parallels (e.g. Dever 1976: 32), or have become extremely muddled because of the confusion over the relationship between the MBIIA-B Levantine phases and the high, middle or low absolute dates (Dever 1991: 77; Matthiae 1984: 25; Weinstein 1992:37-38). Any designations of Levantine MBIIA and MBIIIB phases at Syrian sites should be treated with scepticism unless an adequate matrix of concrete parallels with the Levantine sequence are presented and the correlations are free of any ties to absolute dates, which remain extremely tentative. A further discussion of synchronisms between the Euphrates region and the Levant will be presented in chapter VI of this study.

2. For the use of similarity measurements in seriation analysis, see Orton 1980: 84.

3. Indeed, the application of Shennan’s Coefficient to the entire corpus of rim sherds including those belonging to the miscellaneous one-of-a-kind types produced considerably different results than those obtained without the miscellaneous types. In the former application,
similarities with locus 6 were far less apparent. The strongest similarities were between loci 11 and 1, followed by their association with loci 10 and 4, followed by the group's association with loci 6 and 3, then locus 8, then locus 12 and, lastly, locus 2. Significantly, the results were quite suggestive of a sequence of pottery which represents a short period of time, since loci that were at a considerable distance from one another were found to be the most similar. The exception was locus 12, with its considerably greater number of divergent types.

4. Only slight differences were detected with the application of the Brainerd-Robinson Coefficient to each pair of individual loci as opposed to the application of Shennan's Coefficient. One difference was that the greatest similarity was between loci 6 and 8, not loci 6 and 3 as before. Following that, similarity links were formed among loci in descending order roughly according to their total number of sherds and types, as with Shennan's Coefficient.

5. Type O1 has been included among the main diagnostic types because of its prominence in the middle loci of Group 2, where it is represented by 11 sherds. Its complete absence in Group 3 is thought to be more a case of chance rather than a reflection of its complete disappearance from the assemblage.

6. Dornemann 1992: 78: "Large groups of pottery were found on the stone pavements shown on the plan published in 1979: fig. 25, and after additional clearance, (1992: fig. 1)," from which the 1992 MBIIB pottery is derived. Similarly on p. 84, he notes: "The pottery mentioned earlier, from the stone pavements in Area B, represents an earlier phase of MBIIB (than that illustrated in the 1979 AASOR report) ... (we) tentatively date it to the beginning of the MBIIB."

7. The confusion over terminology appears to have originated with Albright, who used the term "MBI" to describe his pottery from stratum H at Tell Beit Mirsim. This material is associated with the period of urban collapse in Palestine, taking place after the Early Bronze and before the urban revival of the Middle Bronze Age (Albright 1949: 60). The term was also adopted by G.E. Wright (1938) and later by Ruth Amiran (1970: 79-89). These scholars designated the fully developed Middle Bronze assemblage after this period "MBIIA." Today, archaeologists are still divided on what to call the intermediate period of urban collapse, although most prefer to call it either EBIV (Dever 1980; 1992, Oren 1973) or EBIV/MBI (Mazar 1990: 151-52). The subsequent Middle Bronze phase is either referred to as "MBIIA" (Mazar 1990: 175) or MBI (Dever 1990, Oren 1971 and Gerstenblith 1983).


9. Significant changes include the appearance of new bowls with flaring, S-shaped carinations in MBIIB, see Amiran 1970: 112, and plates 33-34. There is also the change in juglets from
those with "gutter" rims and shoulder handles, to those in MBIIB with handles attached at the rim. For further changes, see Kenyon 1960: 167-73.

10. For example, at Kefar Szold and Ginosar, Tomb 1, there are piriform juglets with MBIIB "candlestick" rims and MBIIA featured ridges below the rim (Epstein 1974: 12).
CHAPTER V
A RELATIVE CHRONOLOGY OF SYRIAN EUPHRATES
MIDDLE BRONZE AGE SITES

V.1 Introduction.

Having produced a Middle Bronze chronological sequence based on Tell Hadidi’s ceramic material, it is now possible to determine the temporal position of other Middle Bronze Euphrates’ sites in relation to this sequence.

The same strategy that was used to establish Area B’s relationship with Area F at Tell Hadidi is employed to determine relative dates among the different sites’ assemblages. My operative assumption is that the ten diagnostic rim types (figs. 27-28), which I determined earlier to be representative of the Area F sequence, can be used to cross-date other sites’ assemblages. Moreover, additional evidence provided by Area B allows further chronological fine-tuning of the other sites’ relative dates. The most notable feature of the Area B corpus is the appearance of a flaring-rimmed, globular jar, henceforth described as Type C99 (fig. 28), which was identified only in the latest MB occupation levels of Area B at Tell Hadidi. Type C99 makes its appearance at the period of transition from MBIIA to MBIIIB. Thus, the moderate to frequent presence of this vessel in other assemblages is thought to signal a “transitional” or later phase of the Middle Bronze, while its absence justifies the assignation of an MBIIA date, given that the other diagnostic categories are well represented. Other stylistic features that were first observed on “late” pottery types in the Area F sequence and consequently appeared in the MBIIA/MBIIIB transitional phase of Area B at Tell Hadidi.
Fig. 27: Tell Hadidi’s MBIIA Diagnostic Categories
Tell Hadidi's MBIIA Diagnostic Categories (continued)

Diagnostic Categories Indicative of MBIIA/MBIIB Transitional or MBIIB at Tell Hadidi

Fig. 28
include the presence of inwardly projecting rims on medium and large vessels, henceforth described as Attribute 100 or A100, and the presence of bands of comb incising on large vessels, henceforth described as A101 (fig. 28). These ceramic features should also assist in the relative dating of other Euphrates sites' assemblages.

V.2 "Big Bend" Sites.

El-Qitar

Generally, very little is known about the Middle Bronze occupation at El-Qitar, except for the archaeological material that was uncovered in squares F/H 38 in Area Y, near the Late Bronze Age "Orthostat Building" and the outer defensive wall (McClellan 1986: 92, fig. 5 and 94). The pottery from this area is illustrated in figures 7-9 of El-Qitar's 1986 report (McClellan 1986: 95-98), and is considered typologically earlier than the five chronological groups, established in the second season, that are dated to the Late Bronze Age (McClellan 1984-85: 47-53).

Although there do not appear to be any major chronological differences among the pottery from squares F/H 38, McClellan has provisionally divided the pottery into Groups A-D, each group deriving from a series of loci from earliest to latest deposition. The relative frequencies of each of the vessel types within the groups are illustrated in a table (McClellan 1986: fig. 6). Based on these frequency curves and pottery parallels with other sites, including published material from Tell Hadidi, Halawa and Ebla, McClellan has dated the pottery from El-Qitar to the MBIIIB period (McClellan 1986: 105). The analysis presented
in Table 8, which notes the absence of a number of Hadidi MBIIA diagnostic rim types among the el-Qitar assemblage tends also to support this later date.

<table>
<thead>
<tr>
<th>MBIIA</th>
<th>El-Qitar Diagnostic Rim Types 1</th>
<th>El-Qitar Groups A-D (Area Y, F/H-38)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>McClellan 1986: fig. 8: 4-9</td>
<td>McClellan 1986: fig. 8: 4-9</td>
</tr>
<tr>
<td>C5</td>
<td>McClellan 1986: fig. 9: 15-16</td>
<td>McClellan 1986: fig. 9: 15-16</td>
</tr>
<tr>
<td>C6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C11</td>
<td>McClellan 1986: fig. 9: 13</td>
<td>McClellan 1986: fig. 9: 13</td>
</tr>
<tr>
<td>C12</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C13</td>
<td>McClellan 1986: fig. 9: 5</td>
<td>McClellan 1986: fig. 9: 5</td>
</tr>
<tr>
<td>C14</td>
<td>McClellan 1986: fig. 9: 1-4; 6-12, 14</td>
<td>McClellan 1986: fig. 9: 1-4; 6-12, 14</td>
</tr>
<tr>
<td>C17</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C18</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>O1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C99</td>
<td>McClellan 1986: fig. 8: 1-3</td>
<td>McClellan 1986: fig. 8: 1-3</td>
</tr>
<tr>
<td>A100</td>
<td>present (McClellan: el-Qitar unpublished typology)</td>
<td>present (McClellan: el-Qitar unpublished typology)</td>
</tr>
<tr>
<td>A101</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 8: Presence/Absence of Tell Hadidi's Diagnostic Categories at el-Qitar

Although there are some matches among the MBIIA diagnostic categories, the absence at el-Qitar of a number of types probably indicates a chronological difference. Most significant is the absence of vessel Type C6. At Tell Hadidi, this type of flanged rimmed jar was very popular in MBIIA times (35 sherds of Type C6 [=6% of total assemblage] were found in Area F at Tell Hadidi). It is possible that the rolled rimmed jars (McClellan 1986: fig. 8:10-15), which are present in small quantities at Hadidi in the MBIIA period (Type C25,
became more prevalent through time and eventually replaced the jars of Type C6 entirely in the MBIIIB period.

Large closed vessels with ribbed rims, represented by Hadidi's Types C17 and C18, are absent in the published El-Qitar report. It is possible that none of the large vessels that were excavated are illustrated in the reports; in this regard, their absence does not necessarily reflect a chronological difference between el-Qitar and Hadidi. Additional inquiries regarding unpublished material from el-Qitar, however, confirmed that large ribbed vessels of Types C17 and C18 are indeed infrequent. They have been replaced by large pots characterized by unribbed rims with interior ledges, similar to our late type A100 (McClellan: unpublished el-Qitar typology). One may also note that, among the smaller closed vessels from el-Qitar, there is only one published vessel characterized by a ribbed rim (Type C13; McClellan 1986: fig. 9:5). This stands in marked contrast to the situation in MBIIA levels at Tell Hadidi, where such vessels occur frequently (ribbed-rim vessels account for 31% of the Area F assemblage at Hadidi).

Open forms classified as Type O1, which are distinguished by carinations and ribbed rims, are significantly lacking in the El-Qitar assemblage, and are replaced by flat-bottomed bowls with inverted rims (McClellan 1986: fig. 7). At Tell Hadidi, flat-bottomed bowls with inverted rims first appear at Tell Hadidi in the Transitional MBIIA/MBIIB period (Dornemann 1979: fig. 22: 13-14) and are fully established by the LBIA period at that site (Dornemann 1981: fig. 13: 22-32), as McClellan has already observed (McClellan 1986: 100).

The most significant element regarding the date of the el-Qitar pottery is the presence of Type C99 in the assemblage (McClellan 1986: fig. 8:1-3). McClellan notes the similarities
between this type and the carinated cup forms (McClellan 1986: 100, fig. 8: 4-9; our Type C1, McClellan’s Type C9), but observes that in the frequency curves the latter type occurs earlier than Type C99. This concurs with the evidence from Tell Hadidi, where the carinated cup C1 occurs at the beginning of MBIIA, while Type C99 does not originate until the Transitional MBIIA/MBIIB period.

In summary, a comparative ceramic analysis indicates that the el-Qitar pottery is probably not contemporary with the Tell Hadidi MBIIA diagnostic material and therefore should not date to the MBIIA period. Rather, based on certain vessel characteristics and parallels with other later types, the corpus probably best dates within the MBIIB period. This date would agree with El-Qitar’s published stratigraphy, for the deposits in which the Middle Bronze pottery were found directly underlay Late Bronze structures and pottery, and probably accumulated only shortly before that period.

Tell es-Sweyhat

The published reports of the excavations at Tell Sweyhat document the Middle Bronze Age remains poorly, with little in the way of illustrated pottery. In fact, the only illustrated examples of Middle Bronze pottery come from Holland’s 1977 report of the decorated pottery from the site, of which only three sherds have rims (Holland 1977b: figs. 1:1; 2:1-2), as well as two MB vessels from elsewhere (Holland 1976: figs. 8:1 and 11:6). These examples come from areas for which there is very little stratigraphic information.¹

Given that such a small number of published pots have been published, a comparative analysis that applies the diagnostic categories from Tell Hadidi cannot reliably establish the
date of the Tell es-Sweyhat MB contexts. Only a few general remarks can be made about the pots and how they appear to relate to the Hadidi pottery sequence. First, the closed vessel published in Holland 1976: fig. 8:1 is a good example of the diagnostic Type C12 at Hadidi. The small vessel in fig. 11:6 represents a flared-rimmed pot that may be classified as Type C99. On present evidence, this vessel type does not originate until the time of the transition from MBIIA to MBII B; therefore, the Sweyhat occurrence probably dates to this period or later. Further support for a post-MBIIA date is provided by the large closed vessel illustrated in Holland 1977b: fig. 2:1, which consists of a rim with an interior ledge and a combed and wavy, incised decoration on its shoulder. The same decoration is also evident on the vessel below it (fig. 2:2). In the discussion of the Hadidi material, I suggested that both interior ledge rims (Type A100) and incised decoration on large closed pots (Type A101) are later Middle Bronze developments, being rarely represented in MBIIA contexts. Since three of the five published pieces from Sweyhat fall on the post-MBIIA side of the ledger, it seems reasonable to assign at least the later part of the occupational horizon there to the MBII B period. Obviously, more data are required for any greater degree of certainty.

Tell Mumbaqat/Munbaqa

The amount of illustrated or described pottery attributed to the Middle Bronze occupation levels at Munbaqa is exceedingly low. To date, published pottery is found only in the following excavation reports:

1) Heinrich et al. 1974: Abb. 44-48, 56, 62 (Context: Steinbau 1)
2) Orthmann and Kühne 1974: Abb. 20-22, 40-41. (Context: quadrant 2733, south of Steinbau 1, and quadrant 4931 in northeastern area of the Kuppe)

3) Machule et al. 1992: 19: Only a descriptive report is given. The pottery is characterized by small pots with sharp shoulder carinations, profiled rims on storage jars, ribbing underneath the rims, flat bases and a simple, combed design in the form of parallel bands and wavy lines. (Context: "Mudbrick Building," in area of Steinbau 3).


**Munbaqa's Internal Chronology.** Before determining the date of the Munbaqa pottery in relation to pottery from other Euphrates Middle Bronze Age sites, it is necessary to understand the chronological sequence of the pottery within the site of Munbaqa itself.

The pottery illustrated from successive strata within the Steinbau 1 (no. 1 above) is ordered from earliest to latest as follows, with the corresponding vessels from Hortfunden 1 and 2:

- **earliest**
  - 1a) H6/H7 (considered Early Bronze Age)
  - 1b) H5/H6 and pot from Hortfund 1 (considered Early Bronze Age; Heinrich et al. 1974: Abb. 48)

- **latest**
  - 2c) H4.1/H5 and pot from Hortfund 2 (considered Middle Bronze Age; Heinrich et al. 1974: Abb. 62).

Illustrated pottery from quadrant 2733 (see no. 2 above), excavated in a context immediately next to Steinbau 1, is also supposed to date to the Middle Bronze Age, as implied by the statement that there are similarities between this assemblage and the pottery from the latest levels at Habuba Kabira (Orthmann and Kühne 1974: 77). Pottery analogies between this group and the groups from Steinbau 1, however, are not immediately apparent. The only notable parallel is the presence of internally projecting rims on large vessels in phase...
H4.1/H5 of Steinbau 1 (Heinrich et al. 1974: Abb. 47) and in level 2 from quadrant 2733 (Orthmann and Kühne 1974: Abb. 21:5).

The pottery from level 5b of quadrant 4391 (see no. 2 above), also published by Orthmann and Kühne, is thought to be contemporary with the level 2 pottery from quadrant 2733 and also equated with the latest levels of Habuba Kabira (Orthmann and Kühne 1974: 94). Parallels between this group of pottery and phase H4.1/H5 from Steinbau 1 are found in the form of unribbed projecting rims on both medium and large-sized closed vessels (Heinrich et al. 1974: Abb. 46:3, 7 and Orthmann and Kühne 1974: Abb.41: 5, 8).

The excavators have assigned the pottery from the “Mudbrick Building” and House AD to the Middle Bronze Age (Machule et al. 1992: 19; 1993: 81), although it is difficult to verify this statement based merely on a descriptive report (see no. 3 above) and a single photograph (see no. 4 above). Generally, the two pottery groups seem to be associated with one another; for example, the description of vessels with ribbed ornamentation below the rim and a combed design in the form of parallel bands and wavy lines from the “Mudbrick Building” matches the decorated vessels from House AD that are pictured in the photograph. These photographed pots, however, do not compare favourably with the supposed Middle Bronze pottery from the other Munbaqa contexts described above (nos. 1 and 2). While large pots from the latter contexts have wide, outwardly projecting rims, none of the photographed examples from House AD are characterized by this attribute. Secondly, while incised wavy lines appear to be common on the photographed pots from House AD, such surface decoration is absent on the pots from Steinbau 1 and the other related contexts.
While it is difficult to relate the pottery from House AD and the "Mudbrick Building" to other contexts at Munbaqa, evidence from external sources proves useful. For example, closed vessels with ribbing below the rim and wavy and combed band incision on the shoulders (Algaze 1990: pl. 121 C-J), found in period III at the site of Kurban Höyük in southern Turkey, are quite similar in form and decoration to pots from Munbaqa. The period III pottery from Kurban Höyük is dated to the transitional stage between the Early and Middle Bronze Ages (Algaze 1990: 369). Thus it is conceivable that the Munbaqa pottery from House AD and the "Mudbrick Building" also dates to this time period. Additional support for this dating is provided by Transitional EB/MB pottery from Tell Kabir on the Upper Euphrates, which features a bowl on a pedestal base analogous to the one from House AD (Porter 1995: fig. 18:4; Machule et al. 1993: Abb. 7, lower right corner of photograph). There are also similar pedestal bowls from late EBIV contexts at Tell Hadidi (Dornemann 1979: fig. 14:8).

Based on both internal and external pottery correlations, it seems reasonable to sequence the MB Munbaqa pottery as follows, from earliest to latest:

<table>
<thead>
<tr>
<th>Earliest</th>
<th>b) Pottery from phase H5/H6 of Steinbau 1 (no. 1 above, Abb. 45)</th>
</tr>
</thead>
</table>

Based on both internal and external pottery correlations, it seems reasonable to sequence the MB Munbaqa pottery as follows, from earliest to latest:

<table>
<thead>
<tr>
<th>Earliest</th>
<th>a) Pottery from “Mudbrick House” and House AD (nos. 3 and 4 above)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b) Pottery from phase H5/H6 of Steinbau 1 (no. 1 above, Abb. 45)</td>
</tr>
<tr>
<td>Latest</td>
<td>c) Pottery from phase H4.1/H5 of Steinbau 1 (no. 1 above, Abb. 46-47) = level 2 pottery from quadrant 2733 = level 5b pottery from quadrant 4391 (no. 2 above).</td>
</tr>
</tbody>
</table>

**Munbaqa’s Relative Date.** With this ordering, the relative date of the Munbaqa pottery within the Euphrates sequence may now be determined, using the MB diagnostic categories
from Tell Hadidi as a guide. Parallels between the Hadidi vessel types and pottery from the sequential strata at Munbaqa are provided in Table 9.

<table>
<thead>
<tr>
<th>Munbaqa Contexts-Diagnostic Rim Types</th>
<th>Mudbrick House and House AD (nos. 3-4 from list above)</th>
<th>H5/H6, Steinbau 1 (no. 1 from list above, Abb. 45)</th>
<th>H4.1/H5, Steinbau 1 (no. 1 from list above, Abb. 46-47) and contemporary contexts (no. 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIIA-1C1</td>
<td>—</td>
<td>—</td>
<td>Orthmann and Kühne 1974: Abb. 40:8</td>
</tr>
<tr>
<td>C5</td>
<td>—</td>
<td>—</td>
<td>Orthmann and Kühne 1974: Abb. 41:1</td>
</tr>
<tr>
<td>C6</td>
<td>Machule et al. 1992: 19: stark profilierte Ränder von Vorratsgefässen</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C12</td>
<td>Machule et al. 1993 Abb. 7: rear right side</td>
<td>Heinrich et al. 1974: Abb. 45:1</td>
<td>—</td>
</tr>
<tr>
<td>C13</td>
<td>—</td>
<td>—</td>
<td>Orthmann and Kühne 1974: Abb. 21:3</td>
</tr>
<tr>
<td>C18</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>O1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>MBIIA/ C99 MBIIB-1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A100</td>
<td>—</td>
<td>—</td>
<td>Heinrich et al. 1974: Abb. 46:1; 47:1, 2 and 4 Ortmann and Kühne 1974: Abb. 21:5</td>
</tr>
<tr>
<td>A101</td>
<td>—</td>
<td>—</td>
<td>Heinrich et al. 1976: Abb. 46:3</td>
</tr>
</tbody>
</table>

Table 9: Presence/Absence of Tell Hadidi’s Diagnostic Categories within the Munbaqa Occupational Sequence
It would appear that none of the contexts from Munbaqa are contemporary with the MBIIA period represented at Tell Hadidi, owing to the absent parallels in each of the columns. This may be due, however, to the low number of published examples from Munbaqa. Analogous vessels may have been present but they were not illustrated in the preliminary reports. In light of this consideration, one may note that of the only three published examples of pottery from level H5/H6 from Steinbau 1, all three compare favourably with Hadidi’s Types C12, C14, and C17. This perfect attendance with the diagnostics from Area F at Tell Hadidi suggests that Munbaqa level H5/H6 is contemporary with Area F and dates to the MBIIA period.

The published vessels from Steinbau 1, level H4.1/H5 and the contexts around Steinbau 1 (no. 2 above) do not date to the MBIIA period. In addition to the number of absences noted in the table above, few of the vessels from these contexts compare favourably with the MBIIA assemblage from the late levels at Tell Habuba Kabira (see below for a positive confirmation of the MBIIA date of the Habuba Kabira assemblage), contrary to what the Munbaqa excavators had originally proposed (Orthmann and Kühne 1974: 77, 94). Rather, their best analogies are with vessels that first appear in the transitional MBIIA/B period at Tell Hadidi. This suggests that the level H4.1/H5 corpus fits in a later phase of the Middle Bronze period. For example, large vessels with interior ledge rims are present (Type A100: see table 9 above) as are large vessels with comb incised decoration (Type A101: see table 9 above). The other notable feature in the H4.1/H5 group at Munbaqa is the low frequency of vessels with projecting ribbed rims, as opposed to vessels with simple flat rims (Heinrich et al. 1974: Abb. 46:2-4, 6-7; 47:1; Orthmann and Kühne 1974: Abb. 21:5; 41:7-
8. This pattern is also observed in the MBIIA/MBIIB transitional phase at Tell Hadidi (Domemann 1979: figs. 21:32-35; 23:33).

Other parallels that support a correlation between the Munbaqa H4.1/H5 pottery and the MBIIA/MBIIB transitional pottery from Tell Hadidi are listed:

Domemann 1979: fig. 21: 36-37 = Heinrich et al. 1974: Abb. 47: 2-4

The suggested MBIIA/B or MBIIB date for the Munbaqa pottery from Steinbau 1, H4.1/H5 and the contexts around it, is also supported by the evidence from el-Qitar. The pottery from el-Qitar’s Area Y F/H 38 has been assigned to MBIIB based on its comparisons with the Tell Hadidi material. Significantly, several of the level H4.1/H5 vessels from Munbaqa compare favourably with this el-Qitar material:

McClellan 1986: fig. 7 = Orthmann and Kühne 1974: Abb. 22:2
McClellan 1986: fig. 7:14 = Orthmann and Kühne 1974: Abb. 40:2
McClellan 1986: fig. 8:10-14 = Orthmann and Kühne 1974: Abb. 40:5
McClellan 1986: fig. 8:4-9 = Orthmann and Kühne 1974: Abb. 40:8
McClellan 1986: fig. 9:13 = Orthmann and Kühne 1974: Abb. 41:2
McClellan 1986: fig. 9:4, 6 = Orthmann and Kühne 1974: Abb. 41:3
McClellan 1986: fig. 9:7, 9 = Orthmann and Kühne 1974: Abb. 41:5
Heinrich et al. 1974: Abb. 46:7

Finally, analogies between Munbaqa and Area H XIII at Tell Hadidi support a late MB date for the Munbaqa pottery from Steinbau H4.1/H5 and its related contexts. Domemann
has assigned Area HXIII to LBIA (Dornemann 1981: 42). The presence in this area of vessels with interior ledge rims and ribless projecting rims, as well as other features, such as inturned rims on bowls, all of which are featured at Munbaqa, suggests that the two assemblages are closely related in time. The surviving presence in the Munbaqa assemblage, however, of a number of ribbed rims argues for an earlier MBIIB date for level H4.1/H5, as opposed to the LBIA date assigned to the Hadidi pottery.

The diagnostic type known as C99, a flared rim goblet, is not present among the Munbaqa published examples attributed to the Middle Bronze age. This is problematic, since it is considered a major diagnostic feature of the MBIIB phase at Tell Hadidi. This type of vessel appears in abundance in Late Bronze phases at Munbaqa (de Feyter 1989: fig. 2: 1, 3-5; Machule et al. 1987: Abb. 9:3), however, suggesting that the type probably did exist in the preceding MBIIB period at the site, but examples from these earlier MBIIB locations were not published.

Heinrich’s erroneous assumption that the pottery from level H5/H6 of Steinbau 1 should date to the Early Bronze Age, while the pottery from H4.1/H5 corresponds with the Middle Bronze Age, was based principally on his comparisons between this material and that from periods J and H of the site of Hama in the Orontes Valley (Heinrich et al. 1974: 32-34, 45). The unreliability of this dating scheme may be attributed to trying to cross-date pottery assemblages from two separate cultural regions. Moreover, the two Hortfund en from these levels, which seem to have influenced Heinrich’s dating, are problematic (pp. 30-31 above; Curvers 1991: 55). Most of the parallels with the Hama pottery are based on similarities with the vessels from these hoards, as well as the presence of a fenestrated axe (dated to the MBI
period) that was found in association with level H4.1/H5. These objects, however, are probably heirlooms, which are not particularly accurate dating tools. Finally, my observation that parallels between the other vessels of Munbaqa H5/H6 and H4.1/H5 and Hama J and H, are virtually non-existent, leads one to suspect Heinrich's dates. Given that both Machule (1992: 14), and Curvers (1991: 55) have since assigned Munbaqa H5/H6 to the Middle Bronze Age, it seems reasonable to reject Heinrich's earlier dating scheme.

Table 10 presents the suggested relative position of the Munbaqa contexts within the Middle Bronze Euphrates sequence and in relation to the Tell Hadidi material.

<table>
<thead>
<tr>
<th>Hadidi</th>
<th>MBI (EBIV/MB Transitional)</th>
<th>MBIIA</th>
<th>MBIIA/MBIIB Transitional</th>
<th>MBIIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area B:</td>
<td>Dornemann 1992: fig. 20</td>
<td>Area B:</td>
<td>Dornemann 1992: figs. 3-19 Area F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>House AD: Machule et al. 1993: Abb. 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 10: Chronological Position of the Munbaqa Sequence Relative to Tell Hadidi

Tell Habuba Kabira

Pottery that is thought to date to the Middle Bronze Age is illustrated in two of Heinrich's reports of the excavations at Tell Habuba Kabira (Heinrich et al. 1969: Abb. 18; 1971: Abb. 9-11). The pottery comes from levels 17-20, which are the latest levels of occupation at Habuba Kabira (Heusch 1977: 177). As was noted in the stratigraphic summary of these levels, the pottery is said to come from burned layers associated with
several circular “silos” (Heinrich et al. 1971: 18) as well as a large rectangular structure immediately to the north of the silos (Heinrich et al. 1969: 56).²

Eva Strommenger, who was responsible for the analysis of the Habuba pottery, dated the material from levels 17-20 to the period of the Old Babylonian kings, including those of the Isin/Larsa dynasty (Heinrich et al. 1971: 24-25). This was based primarily on ceramic parallels with level H at Hama, which has been dated to 1900-1550 B.C. (Fugmann 1958: 278), as well as other sites in the Orontes River region of Syria and Palestine (Heinrich et al. 1971: 25). She also noted that pots with comb-incised decoration found in these latest levels have analogies with vessels from several other Near Eastern sites dating between the Old Akkadian and Larsa periods (Heinrich et al. 1971: 24-25). Neither of these analogies is very satisfactory, however. The dates given for the Hama and other Levantine material are not absolute dates; rather they themselves are based on pottery parallels with other sites in the Near East whose dates are still tentative.³ Furthermore, the determination of the date of an assemblage based chiefly on the presence of comb-incised decoration is problematic since, in general terms, the stylistic feature occurs in the Greater Mesopotamian sphere over a long period of time, and its application on pots differs greatly from site to site. The date of Habuba Kabira’s latest levels should first be established in relation to the other ancient sites within its own geographical milieu, namely the Euphrates region of Northern Syria. In this regard, comparisons to Tell Hadidi’s Middle Bronze sequence, based on the presence or absence of diagnostic categories in the following table (Table 11), provides the best formula for establishing a relative date for Habuba Kabira.
<table>
<thead>
<tr>
<th>Habuba Kabira Levels - Diagnostic Rim Types</th>
<th>Levels 17-20 (Heinrich et al. 1969; 1971)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MBIIA - 1</strong></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>1971: Abb. 11:3-10</td>
</tr>
<tr>
<td>C5</td>
<td>1971: Abb. 11:13-14, 17</td>
</tr>
<tr>
<td>C6</td>
<td>1971: Abb. 11:24-31</td>
</tr>
<tr>
<td>C11</td>
<td>1971: Abb. 10:21</td>
</tr>
<tr>
<td>C12</td>
<td>1971: Abb. 10:22</td>
</tr>
<tr>
<td>C17</td>
<td>1971: Abb 10:4, 7, 10, 12</td>
</tr>
<tr>
<td>C18</td>
<td>1971: Abb 10:13-14</td>
</tr>
<tr>
<td>O1</td>
<td>1971: Abb. 9:17-18</td>
</tr>
<tr>
<td><strong>MBIIA/MBIIB - 1</strong></td>
<td></td>
</tr>
<tr>
<td>C99</td>
<td>1969: Abb. 18:a(?)</td>
</tr>
<tr>
<td>A100</td>
<td>1971: Abb. 10:6</td>
</tr>
<tr>
<td>A101</td>
<td>1971: Abb. 9:26</td>
</tr>
</tbody>
</table>

Table 11: Presence/Absence of Tell Hadidi’s Diagnostic Categories at Tell Habuba Kabira

As the table indicates, the pottery from the latest levels at Habuba Kabira contains rim forms that correspond with all ten diagnostic rim types from Tell Hadidi that are thought to indicate an MBIIA date. Rim Type C99, the flaring rimmed goblet, may also be present at Habuba Kabira. The relevant example of this vessel (Heinrich et al. 1969: Abb 18 a) is broken at the rim and so it is difficult to confirm that it represents a true C99 form. The raised collar at the neck of the vessel is not a common feature on the examples from Tell Hadidi except for one of the larger pots (Dornemann 1979: fig. 23: 44); but this distinctive collar characterizes Type C99 vessels from other sites, namely those in the Habur region of Syria: Tell Fahhariyya (McEwan 1958: pl. 37: 123) and Chagar Bazar (Mallowan 1947: pl.
The modest presence of Type C99 in the corpus from Habuba Kabira along with the presence of rims with interior ledges (A100) and comb incising on large vessels (A101) suggests that some of the latest pottery from Habuba Kabira may date to the transition between MBIIA and MBIIB.

Like the Area F pottery from Tell Hadidi, the Habuba Kabira corpus is chiefly characterized by vessels thought to fall early in the Middle Bronze sequence. Besides the presence of the ten MBIIA diagnostic categories listed above, they include hole-mouth pots with swollen rims (Heinrich et al. 1969: Abb. 18: 4; 1971: Abb. 10: 18, 27-28), and bowl forms with swollen rims (Heinrich et al. 1971: Abb. 9: 5-6), both classified as “early” types at Hadidi. Based on the available evidence, which shows Habuba Kabira’s strong parallels with the MBIIA pottery from Tell Hadidi, it seems reasonable to argue that the bulk of occupation in levels 17-20 at Habuba Kabira falls within the MBIIA period.

One may note that the stratigraphy at Habuba Kabira agrees with the dating of levels 17-20 to the MBIIA period. The large rectangular building that was used in the Middle Bronze Age, and in which much of the MB pottery was found, was originally planned and constructed in the Early Bronze Age (Heusch 1977: 177, compare the layout of the building in R11 in levels 17-20, with the R11 building in the earlier level 15, p. 175). That the people of the Middle Bronze Age had continued to use the same basic plan, building their walls over the remnants of the earlier walls, suggests that the MB occupation took place only a short time after the demise of the Early Bronze settlement.
Halawa


The illustrated Middle Bronze pottery derives from Quadrant Q, the residential quarter of the city. It was assigned to levels 1 (Orthmann 1981: Taf. 43-44), 2b and 2c (Orthmann 1981: Taf. 45-48, and 49: 1-8, 11-12; 1989: Abb.10). The majority of level 2 pots were found on the floors of domestic houses or in the occupational fill above the surfaces. Much of the level 2 illustrated pottery derives from House 1 of Quadrant Q (sector 1d: Orthmann 1981: Taf. 45-47, 48) although pots from other buildings are also represented. The pottery from level 1 was found within large houses that were built over level 2, although some of this material’s context is suspect because of the eroded character of level 1 and its proximity to the surface of the tell.

The pottery derived from the living floors of level 2c is illustrated by only a few examples (Orthmann 1981: Taf. 46). Because of this factor and the close stratigraphic relationship between levels 2b and 2c (the buildings of level 2b represent local re-buildings and renovations of existing level 2c structures; Orthmann 1981: 24), I have opted to group the 2c pottery together with the 2b pottery in determining Halawa’s relative chronology. Note that Orthmann abandons the phase distinction between 2c-b altogether in his 1989 report (Orthmann 1989: 26-28), suggesting that the differences between the phases were relatively insignificant.
Table 12 records the presence or absence of the diagnostic rim types in each of Halawa's phases, with reference to parallels in the Halawa publications, if they exist.

<table>
<thead>
<tr>
<th>Halawa Levels - Diagnostic Rim Types¹</th>
<th>Level 1 (Orthmann 1981: Taf. 43-44)</th>
<th>Level 2b-c (Orthmann 1981: Taf. 45-49; 1989: Abb. 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIIA - ¹</td>
<td>C1</td>
<td>1981: Taf. 45:1-7; 47: 26, 28-30; 48:5; 49:3-4; 7-8; 1989: Abb. 10:4-5, 11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1981: Taf. 48:6 and 12</td>
</tr>
<tr>
<td>C6</td>
<td>1981: Taf. 44: 9-10, 15-16</td>
<td>1981: Taf. 47:5-6, 10, 12, 14; 48:22-23</td>
</tr>
<tr>
<td>C11</td>
<td>—</td>
<td>1981: Taf. 45:22 (perfect match, including fabric)</td>
</tr>
<tr>
<td>C17</td>
<td>—</td>
<td>1981: Taf. 48:11</td>
</tr>
<tr>
<td>C18</td>
<td>—</td>
<td>1981: Taf. 46:1</td>
</tr>
<tr>
<td>O1</td>
<td>1981: Taf. 44:3</td>
<td>1981: Taf. 48:1</td>
</tr>
<tr>
<td>MBIIA/MBIIB - ¹</td>
<td>C99</td>
<td>—</td>
</tr>
<tr>
<td>A100</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A101</td>
<td>1981: Taf. 44:5</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 12: Presence/Absence of Tell Hadidi's Diagnostic Categories at Halawa

According to the dating scheme devised in this study, sites' assemblages that match up well with the first ten diagnostic types are thought to be contemporary with Tell Hadidi's MBIIA phase, recognized both in Areas F and B, while those that do not are either earlier or later in date. According to these criteria, it would appear that level 1 is not contemporary with Hadidi's MBIIA, owing to a large number of absences in the diagnostic categories, while levels 2b-c are contemporary.
In the excavation reports, Orthmann suggests that level 1 represents a developed phase of the Middle Bronze because of various "late" features in the pottery. For example, the shallow, flat-bottomed bowls illustrated in plate 43:28-29 (Orthmann 1981) have good analogies with bowls from Late Bronze levels at Tell Hadidi (Dornemann 1979: fig. 20:12-13). However, because the level 1 corpus does not include the flaring rimmed globular vessels of C99, Orthmann suggests that the level is earlier than the pottery presented in Dornemann's 1979 report (Orthmann 1981: 27), which in this study has been dated to the transitional MBIIB period. Orthmann's dating is unlikely, however; there are simply too many of the MBIIA diagnostic types absent in level 1, especially vessels with ribbed rims which are represented only by one bowl (Orthmann 1981: Taf. 44:3) and possibly one closed form (Orthmann 1981: Taf. 44:8) to be dated to this period. In contrast, the decoration of comb incising and wavy lines on a very large krater (A101 above) that is represented among the level 1 corpus (Orthmann 1981: Taf. 44:5) is a late Middle Bronze feature at Tell Hadidi, and this would further support a late Middle Bronze date.

We should note the presence of caliciform beakers of type O6 (Orthmann: Taf. 43:31-33) in level 1. Since these are remnants of the earlier EBIV assemblage their presence in level 1 is unexpected. Orthmann does note, however, that some of the level 1 pottery was found on the surface rather than in secure occupational contexts (Orthmann 1981: 26); thus, it is possible that the beakers were present in redistributed fill associated with later rebuilding.

Whereas the level 1 pottery probably dates to the MBIIB period, there is little doubt that the earlier level 2b-c pottery dates to the MBIIA period. Orthmann assigns an early Middle Bronze date to the pottery in both reports (Orthmann 1981: 29; 1989: 28) although
the date is based on different criteria than what have been established in this study. For example, he notes the higher occurrence of vessels with combed and wavy, incised decoration in levels 2b-c as opposed to level 1 (Orthmann 1981: 29), confirming Dornemann's observation that wavy, incised decoration sharply declines in the later part of the Middle Bronze period (Dornemann 1979: 139). This development is supported in the area F assemblage, where the number of wavy-lined rims and bodysherds declines in the very latest loci, but this can not be confirmed until more quantifiable material is obtained. Orthmann also notes the lack of level 2 vessels at Halawa with projecting, sharply undercut rims, these being prominent at Hadidi in the Area B corpus illustrated in the 1979 report. Thus, he considers the Hadidi pottery to be later than the Halawa 2 pottery (Orthmann 1981: 29). The pottery to which Orthmann is referring are vessels that are also characterized by interior ledge rims (Dornemann 1979: fig. 21: 32-34, 36-37), an attribute that I suggest appears in a developed phase of the Middle Bronze. Thus my observations agree with Orthmann's; he has merely stressed different stylistic characteristics of the "late" vessels.

Dornemann, in his 1992 treatment of the Middle Bronze Hadidi pottery, agrees that the Halawa 2b-c material should date to an earlier period than the pottery presented in his 1979 AASOR report (Dornemann 1992: 83). Furthermore, Dornemann argues that the pottery from the earlier pavements of Area B, which is presented in the 1992 publication and which he dates to the early part of MBIIB, is contemporary with the Halawa material (Dornemann 1992: 84). In relative terms, my devised pottery chronology agrees entirely with this, only Dornemann's 1992 "MBIIB" pottery was pushed back to MBIIA (Cooper) in the
analysis presented above. The Halawa 2b-c pottery is still considered contemporary with this material, and consequently must also be dated to the MBIIA period.

The appearance of caliciform beakers of vessel type 06 in levels 2b-c at Halawa (Taf. 45:15; 48:3-4), here in better contexts, suggests a close relationship with the earlier EBIV phase at the site, and therefore further supports the MBIIA date for level 2. A few other EBIV attributes can be noted: for example, vertical-rimmed bowls of Type 03 are represented in the level 2 assemblage (Orthmann 1981: Taf. 45:12), as well as a beaker-type of vessel with a distinctive, projecting, vertical rim (Orthmann 1981: Taf. 45:16) that is commonly associated with EBIV contexts in the Euphrates region of Syria (Strømmenger et al. 1987: Abb 14:17; Dornemann 1979: fig. 18: 46-48).

The reasonably close association between levels 2b-c and the EBIV period is also suggested by the stratigraphy at Halawa. EBIV architecture and pottery comes from level 3, which underlies level 2 in several areas of the tell. Significantly, level 3 is best understood in Quadrant Q, which, like level 2, is a residential area comprising domestic houses and interconnecting streets (Orthmann 1989: compare the layout of level 2, Abb. 6 with that of level 3, Abb. 15, especially in Quadrant Q). We are told that the builders of level 2, in order to create a level surface upon which to build their structures, often had to cut down the walls of the earlier level 3 buildings and fill in their rooms with rubble (Orthmann 1989: 23). Furthermore, one of the main streets of level 2 was built directly over part of the level 3 city wall and follows the same alignment (Orthmann 1989: 22). The level 2 builders were obviously aware of the layout and function of level 3, and this suggests that the time span between the two phases was relatively short.
In summary, the results of the study indicate that Halawa's levels 2b-c should be dated to MBIIA, contemporary with most of the excavated levels from Tell Hadidi, while level 1 probably represents the MBII B period.

Tell Bi’a

A considerable amount of archaeological material from Tell Bi’a has been attributed to the Middle Bronze Age. Since a final report of the German excavations at this site has not yet been published, one must look through a number of preliminary reports to find illustrations of pottery dating to this period. The following bibliography lists all of the relevant pottery:

1) Strommenger et al. 1982: Abb. 9
2) Strommenger et al. 1982: Abb. 14
3) Strommenger et al. 1984: Abb. 5
4) Strommenger et al. 1984: Abb. 21:a-l
5) Strommenger et al. 1989: Abb. 8-9 (clay stoppers from ceramic vessels)
6) Strommenger 1989: fig. 7 (right side of page)
7) Strommenger 1991: Abb. 5
8) Einwag 1993: Abb. 4-9

Tell Bi’a’s Internal Chronology. The largest and most important group of illustrated vessels was uncovered in the so-called “Palace” located on the south-western slope of Hill E. This building is thought to have served as the official residence of either royal persons from Mari or the governor of Tuttul, owing to its large size, its layout, and the high quality of its construction (Strommenger et al. 1986: 19). The Palace was abandoned, but was subsequently re-occupied after a short length of time. In this later period, significant changes
were made to the internal layout and function of the building. For example, earlier royal reception halls were replaced by kitchens with ovens, storage rooms and work places (Strommenger et al. 1986: 21-23). All of the Palace pottery illustrated in the preliminary reports derives from this “post-Palace” phase (nos. 5-9 above).

All of the illustrated pottery from the “post-Palace” phase comes from one context with the exception of the clay stoppers (no. 5 above), which were found in a room near Courtyard 16. The stoppers are included in the pottery list because they preserve impressions of trefoil-shaped jug rims. The pottery illustrated in the 1989 article (no. 6 above) is said to come from the period of the “post-use” of the Palace, although its precise location is not reported (Strommenger 1989: 101). However, owing to the large number of exact matches between this pottery and the pottery from Room 5 that is illustrated in the most recent excavation reports (nos. 7-8 above), it is probable that much of the 1989 pottery also came from Room 5. The latter material was found in a pit that was dug into the floor of the chamber, immediately over an earlier EBIV rectangular tomb (Strommenger 1991: 11-15). The pit was initially dug as a mass grave, into which a great number of corpses were thrown (Strommenger 1991: 15). After the grave was partially covered over it accumulated ashy debris and trash from the activities connected with the “post-Palace” phase. Many pottery fragments were found among this ashy debris, along with clay-cylinder seal impressions and, most importantly, cuneiform tablets (Strommenger 1991: 15). Since the tablets bear year-names dating to the time of Yasmah-Adad of Assyria, around 1780 B.C. (Krebernik 1990: 67-88), one can assume that the associated pottery dates to this period as well. This is our first reported absolute date for a ceramic assemblage in the Euphrates region of Syria, and it
provides an important means by which other related pottery assemblages can also be absolutely dated.

Illustrated pottery from other areas of Tell Bi'a appear to be more or less contemporary with the pottery from the "post-phase" of the Palace on Hill E. Pottery reported in the 1982 report (no. 2 above) is said to come from a large mud-brick "long-roomed temple" on Hill C (Strommenger et al. 1982: 96). The pottery was found on the brick floor of the lowest phase of the temple (Strommenger et al. 1982: 97). It is possible to find good parallels between this group of rim sherds and the group from the "post-phase" of the Palace. Consequently, the pottery from the lowest phase of Temple from Hill C probably also dates around the time of the Assyrian hegemony at Tell Bi'a.

Besides the pottery from the temple, there are vessels that are supposed to derive from two graves that cut through the outer part of the northern wall of Hill C's temple in its earliest phase (no. 4 above, Strommenger et al. 1984: Abb. 21: a-e), as well as vessels from two graves that were dug into a courtyard-like area immediately to the north of the temple (no. 4 above, Strommenger et al. 1984: Abb. 21: f-l, Abb. 23). Again the illustrated pots compare favourably with the published vessels from the "post-phase" of the Palace of Hill E, and I am inclined to date them to approximately the same time period.

Finally there is a small group of vessels that were excavated in a sounding on the northern slope of Hill E, where a series of mudbrick buildings was uncovered. One of the vessel groups is associated with the latest layers of this area (levels I and II, no. 1 above), which consist of partial remains of walls, floors, tannurs and fireplaces (Strommenger et al. 1982: 85-87). The other pottery is derived from level III, from a grave dug into the "Green
House” (no. 3 above, Strommenger et al. 1984: Abb. 5:a-b), level IVa, from the “White Building” (no. 3 above, Strommenger et al. 1984: Abb. 5:c-e), and level Vb (no. 3, Strommenger et al. 1984: Abb. 5:f). The excavators report parallels between the vessels found in level Vb and the “post-phase” of the Palace (Strommenger et al. 1986: 21). Thus, while level Vb of Hill E North is contemporary with the “Post-Palace” phase, all of the subsequent levels of Hill E North are later than the “Post-Palace” occupation.

Based on the correlations outlined above, the illustrated pottery from Tell Bi’a can be arranged in the following sequence from earliest to latest:

a) circa. 1780 B.C. = “Post-Phase” pottery, nos. 5-8 in list above
   = Assyrian Period
   = Hill C Temple pottery, no. 2
   = Hill C Grave pottery, no. 4
   = Hill E North, level Vb pottery, no. 3, Abb. 5:f only

b) post-1780 B.C. = Hill E North, level IV pottery, no. 3, Abb. 5:c-e only

c) post-1780 B.C. = Hill E North, level III pottery, no. 3, Abb. 5:a-b only

d) post-1780 B.C. = Hill E North, level I-II pottery, no. 1

(latest)

Tell Bi’a’s Relative Date. Like the other sites that have been analyzed, comparisons between the Tell Bi’a pottery and the diagnostic categories established for the Tell Hadidi Middle Bronze material are used to determine the relative date of Tell Bi’a’s Middle Bronze occupation. This analysis focuses chiefly on the pottery from the “post-phase” of the Palace on Hill E and the material from contemporary contexts. Unfortunately, the remaining pottery, which is thought to derive from later levels of occupation (from Hill E North), consists of too few examples to be effectively cross-dated using the procedure established in this study. It
is possible, however, to present some general remarks about this material in the ensuing discussion of Tell Bi’a’s chronology.

Before presenting a table listing rim type analogies, a few matters regarding the published pottery from Bi’a’s “Post-Palace” phase needed to be resolved. One is the fact that the illustrated vessel profiles are not accompanied by any rim-diameter measurements (see especially Einwag 1993: Abbs. 4-8). Data regarding vessels’ rim diameters are frequently important in confirming analogies with Tell Hadidi’s diagnostic rim types. Their absence at Bi’a increased the difficulty of assigning a vessel to the correct category. In general, this problem was overcome by paying close attention to the thickness of the rim profiles of the illustrated vessels, since rim thicknesses are also distinguishing features of the various rim categories from Hadidi. Moreover their widths are usually proportional to the vessels’ rim diameters.

The other problem is that the feature of ribbed rims is exceedingly rare at Tell Bi’a (we have only noted one example of a ribbed rim at Tell Bi’a: Strommenger 1989, third row, fourth from left). At Tell Hadidi as well as other “Big Bend” sites, ribbed rims occur in several categories of closed and open vessels (Types C13, C17-18 and O1), and are considered a major defining feature of their Middle Bronze assemblages. Although there is very little artifactual evidence from Bi’a’s earlier and later phases, it appears that ribbed rims were never prominent at the site and thus, their absence in the “post-phase” of the Palace probably does not reflect a temporal variance with the Tell Hadidi pottery. Instead, one can argue that the absence of ribbed rims at Tell Bi’a signifies the site’s location in a cultural sphere distinct from the “Big Bend” region. The characteristic of ribbed rims was never part
of Bi’á’s stylistic tradition. Further support for this suggestion is provided by the pottery from Mari, also outside the “Big Bend” region, where ribbed rims are also extremely rare in all documented phases of the Middle Bronze Age.

Given the evidence, which seems to reflect a geographical/cultural difference rather than a chronological development, it has been necessary to amend the diagnostic criteria that are used to establish Tell Bi’á’s relative date. In particular, in this region and beyond, the feature of ribbed rims has been excluded from the description of the MB diagnostic rim categories. This amendment affects vessel Types C13, C17, C18 and O1. Henceforth, a vessel is said to parallel vessels belonging to these categories if it has the same general rim profile even though it lacks the ribbing.

Thus, the Tell Hadidi diagnostic assemblage has been reduced to nine types. Type C14, which is identical to C13 at Tell Hadidi, except that it consists of pots without ribbed rims, has been combined to C13 to represent one vessel category. While I consider the presence of these associated nine types to indicate an MBIIA date for the pottery assemblage, the additional presence of C99, A100 and A101 may be taken as dating the assemblage to the Transitional MBIIA/MBIIB. The absence of parallels among the MBIIA diagnostic types suggests that the pottery dates to the MBIIB period, as had been proposed for the dating of the other “Big Bend” sites.

Table 13 lists parallels between the pottery from Tell Bi’a and the amended diagnostic categories from Tell Hadidi.
Table 13: Presence/Absence of Tell Hadidi’s Diagnostic Categories at Tell Bi’a

Having disregarded the presence or absence of ribbed rims on assorted vessels, one finds that the Tell Bi’a pottery from the “Post-Palace” phase has excellent parallels with the MBIIA diagnostic types established at Tell Hadidi. The only absent type is C18, which represents a large closed vessel with a short neck and projecting rim. One suspects that vessels of this size were found but not illustrated. Some support for this is suggested by the author’s remark that several of the vessels from the Post-Palace pit bear rope or “piecrust” decoration (Einwag 1993: 45), a feature that is typically found on closed vessels of Type C18 from the “Big Bend” region.
The closest parallels between Bi’a and Hadidi exist among the carinated bowl forms of Type O1. With the exception of ribbing, which exists on all of the Hadidi rims belonging to this type, the Bi’a bowls are nearly identical to the Hadidi bowls, with the same type and range of carinations, rim widths and vessel heights.

One closed vessel form, illustrated in Einwag 1993: Abb. 6: 31, may represent Type C99, since it is characterized by the same kind of simple, flared rim as is observed on C99 vessels from the “Big Bend” sites (see for example, Type C8 from el-Qitar, McClellan 1986: fig. 8: 1-3). Because of this vessel’s rare occurrence, however, the assemblage probably does not date later than the end of the MBIIA period. Moreover, the other diagnostic types (A100 and A101) that denote a transitional MBIIA/MBIIB or MBIIB date for the assemblage are notably absent.

It is possible to note other parallels between the Bi’a pottery and the MBIIA group from Tell Hadidi besides those cited above. For example, a number of caliciform beakers (Hadidi Type O6) are present at Tell Bi’a (Einwag 1993: Abb. 4: 1-6) as are a few bowls with vertical rims (Hadidi Type O3) (Einwag 1993: Abb. 4: 1-6). There are also examples of vertical-ribbed closed forms (Hadidi Type C10). At Hadidi, all of these vessel forms appear in MBIIA, particularly in the early part of the period.

Pottery that is considered to post-date the material from the “post-phase” of the Palace at Tell Bi’a probably does not belong within the MBIIA tradition. In particular, one may note the flaring-rimmed cups found in graves assigned to level IVa (Strommenger et al. 1984: Abb. 5:c-d). They are good examples of type C99, a vessel common in the MBIIA/MBIIB and MBIIB periods. Variations on this type occur in levels I-II, where they
feature raised, concave bases and collared shoulders (Strommenger et al. 1982: Abb. 9: left column). The other illustrated vessels from levels I-II, incidentally, are entirely foreign to the MBIIA tradition in the “Big Bend” region, and thus support a later date for this material.

In summary, the pottery analysis above has concluded that the pottery from the “post-phase” of the Palace at Tell Bi’a, is dated to the MBIIA period, while the other illustrated pottery from occupation levels that are stratigraphically later than this material are dated to the MBIIB period or perhaps even later. Since the “post-phase” Palace pottery has also been assigned an absolute date, 1780 B.C., then one may conclude that this date falls somewhere within the MBIIA tradition established for the Euphrates region. Thus all other pottery assemblages that are dated to the MBIIA, namely the material from Tell Hadidi, Munbaqa, Habuba Kabira and Halawa, may also be dated around 1780 B.C..

**Chronological Summary of the “Big Bend” Sites**

The following table presents a relative chronology for all of the Middle Bronze Age sites in the “Big Bend” Euphrates region of Syria, based on the conclusions generated in this study.
<table>
<thead>
<tr>
<th></th>
<th>EB/MB Transitional (MBI)</th>
<th>MBIIA</th>
<th>MBIIA/MBIIB Transitional</th>
<th>MBIIIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hadidi</td>
<td>Area B (Dornemann 1992: fig. 20)</td>
<td>Area F</td>
<td>Area B (Dornemann 1979: figs. 20-23)</td>
<td>------</td>
</tr>
<tr>
<td>el-Qitar</td>
<td>------</td>
<td>------</td>
<td>Area Y, F/H</td>
<td>------</td>
</tr>
<tr>
<td>Sweyhat</td>
<td>------</td>
<td>------</td>
<td>Area V</td>
<td>------</td>
</tr>
<tr>
<td>Munbaqa</td>
<td>&quot;Mudbrick House&quot; House AD</td>
<td>Steinbau 1, phase H5/F6</td>
<td>Steinbau 1, phase H4.1/H5, Quadrants 1744 and 4931</td>
<td>------</td>
</tr>
<tr>
<td>Habuba</td>
<td>------</td>
<td>Levels 17-20</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Kabira</td>
<td>------</td>
<td>Level 2b-c</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Halawa</td>
<td>------</td>
<td>Post-Phase of Palace Hill C Temple Hill C Grave Hill E North, level Vb</td>
<td>------</td>
<td>Level 1</td>
</tr>
<tr>
<td>Bi'a</td>
<td>------</td>
<td>------</td>
<td>Hill E North, levels IV-I</td>
<td>------</td>
</tr>
</tbody>
</table>

Table 14: Relative Chronology of Middle Bronze Euphrates “Big Bend” Sites

V.3 Mari Region Sites and Relative Chronology

Introduction. For the current study, the chief focus in the Mari region is on the archaeological data from sites dating to the first half of the second millennium B.C. The sites include Tell Mohasan, Tell Ashara/Terqa, Mari, Baghouz and Khirbet ed-Diniyeh/Haradum. Establishing the date of these sites relative to those of the “Big Bend” to the northwest is critical to the formulation of a Middle Bronze chronology for the Euphrates Valley of Syria, as well as any subsequent study of long-distance interaction and cultural exchange for this
time period. However, it is difficult to determine the Mari sites’ relative dates based on the application of the diagnostic categories established for the Middle Bronze ceramic sequence at Tell Hadidi. One can recall that it had already been necessary to amend and reduce Hadidi’s original categories in order to determine the relative chronological position of Tell Bi’a, since geographical distance and a separate cultural tradition appears to have contributed to fundamental stylistic differences between the ceramic assemblage of this particular site and those of the Big Bend region to the northwest. For each of the ancient sites of the Mari region, which are located even further away from the Big Bend region of the Euphrates River, one can expect to see an even greater number of divergences from the original Hadidi ceramic categories. To be sure, this type of pattern, in which differences between assemblages increase with geographical distance, has been observed elsewhere in the ancient Near East. J. S. Holladay records a similar pattern among early Iron II material in Palestine. In this case, the number of Iron II pots with successful comparisons with the Gezer assemblage seems to decrease as one travels overland away from that site (Holladay 1993: 96-96; fig. 10).

A preliminary comparison between each of the ceramic assemblages from sites of the Mari region and Tell Hadidi’s diagnostic vessel types reveals that, as at Tell Bi’a, the feature of ribbed rims is notably absent in the ceramic assemblages of the southern sites in all phases of the Middle Bronze sequence except for isolated examples. The other notable trend at each of the sites is the low frequency of sherds that do have parallels with the pottery types represented by the Tell Hadidi diagnostic categories.

Finding complete pottery analogies between the Hadidi diagnostic categories and the assemblages of each site in the Mari region is also frustrated by the incompleteness of the
ceramic data from these sites. Only 15 published sherds, for example, represent the second millennium pottery from Tell Mohasan (Geyer and Monchambert 1978: fig. 12). Similarly, the quantity of published pottery from Mari itself is limited considering the great amount of archaeological exposure of early second-millennium B.C. occupation at that site. Difficulties in establishing pottery parallels may also be attributed to the nature of the contexts from which some of the pottery is derived. This is particularly true of the Baghouz material, which is derived from tomb contexts and which probably does not represent the full range of ceramic forms that would otherwise appear in domestic, public or other types of “living” contexts, like the pottery from Tell Hadidi and other assemblages of the “Big Bend”.

The factors listed above have made it virtually impossible to cross-date each Mari-region site individually with the MB “Big Bend” sites according to the pottery categories established at Tell Hadidi. Consequently, the chosen strategy has been first to establish a relative chronology for the Mari region itself. Given that Mari was the most influential settlement within the region, and that much of its second-millennium occupation has been securely dated to the period just before the site’s destruction in 1761 B.C., thus establishing an absolute date and terminus post quem for its ceramic material, it seemed best to determine each of the sites’ chronological position relative to this site. Thus in the chronological analysis, Mari’s fixed position has served as the framework by which the other sites’ relative dates have been determined. After the relative chronology of the settlements of the Mari region has been attained, the Tell Hadidi diagnostic types have been applied to the pottery from all of the contemporary sites/areas/phases combined. It is argued that there are enough pottery examples from the combined sites to establish an effective relative date between the
Mari region and the Middle Bronze period of the “Big Bend” region of the Upper Euphrates Valley as represented at Tell Hadidi.

The chief evidence used to establish the relative chronology of the Mari region has been information from textual sources and parallels among the pottery assemblages of each of the sites. Textual information from secure contexts excavated at Mari, Tell Ashara/Terqa and Khirbet ed-Diniyeh/Haradum has facilitated the dating of particular excavated areas or occupation phases to specific periods of time. This has been particularly productive when the texts mention names or describe events whose placement in time are well-established within the Babylonian or Mariote dynastic chronologies. An independent study has then been carried out on the ceramic assemblages. The study involves finding parallels between pottery forms from each of the Mari-region sites and Mari itself. As was argued for the “Big Bend” region, a large number of pottery homologies should be present among sites that co-existed. Significantly, conclusions reached on the basis of the textual synchronisms are remarkably consistent with the results achieved through a cross-dating of the pottery, thus validating the uses of pottery in this kind of chronological study and substantiating the final chronological scheme devised for this particular region.

Mari

Internal Chronology. Before undertaking a chronological study to fix the Mari region sites’ relative to Mari, it is important to verify that all of the excavated material from Mari, derived from an assortment of separate excavation areas, is roughly contemporary.
Zimri-Lim Palace: Textual Sources. At least 13,000 cuneiform tablets were discovered on the floors of rooms throughout the palace, either individually or in small groups. In addition, there are archive rooms, where hundreds of tablets were deposited (for example Room 115, a chamber between Courtyard 131 and the ceremonial courtyard 106; Parrot 1958: 80-81). The tablets comprise letters of all kinds, ration lists, personnel lists, records of legal decisions, tax collections and groceries for the kitchens (Dalley 1984: 15). Unfortunately, there does not appear to be any reasoning behind the groupings of tablets:

Tablets from different reigns were jumbled together, the letters of a legitimate king along with those of a usurper. Food lists lay cheek-by-jowl with letters from foreign rulers ... no attempt had been made to destroy the records of an illegitimate or unpopular regime, as if changes in political power scarcely interrupted the flow of internal bureaucracy. But probably some of the tablets had been scattered and jumbled together when the palace was ransacked by the victorious Babylonians who brought the power of Mari to an end (Dalley 1984: 19).

All of the mixed tablets date within the reigns of rulers of the early second millennium B.C. They begin with the records of Yahdun-Lim, the founder of the Amorite dynasty at Mari in 1815 B.C., followed by documents written during the Assyrian interlude under Shamshi-Adad and his son Yasmah-Adad, who served as vice-regent at Mari between 1798-1775 B.C. Lastly, there are the tablets written during the reign of Zimri-Lim, who ruled at Mari until it was destroyed by Hammurapi in 1761 B.C. In total, the tablets left scattered on
the floors of the rooms of the Palace prior to its abandonment cover a time period of about 55 years. None of the tablets date to the period after 1761 B.C. Based on the information from the textual sources, one can date the occupation of the Palace to the last quarter of the 19th century and the first half of the 18th century B.C.

**Zimri-Lim Palace: Pottery.** One of the principal drawbacks of Parrot’s excavations at Mari is that there is little in the way of published pottery in proportion to the colossal amount of second-millennium architecture explored within the Palace. To date, the only descriptive report of the Middle Bronze Palace pottery from Mari appears in one of Parrot’s monographs on the Palace and covers only his earliest investigations (Parrot 1959: 114-45 and pls. XXXV-XXXVIII). Undoubtedly more pottery was collected after this publication, but it has never been reported. The other frustrating element of Parrot’s publications is that his photographs of excavated rooms and features within the Palace show a large amount of pottery that was found in situ, but only a very small number of selected intact vessels were ever included in his pottery catalogue. Particularly disturbing is the observation in some of the photos of vessel fragments, piled high on the excavated balks or walls of some areas, that presumably were not counted, drawn or described (eg. Parrot 1958: pl. XVI:1, XXVI:1). Clearly such a collection of pottery would have provided critical information about the ceramic assemblage of Mari’s Palace and its chronological position relative to other sites in the Euphrates Valley. In the absence of this material, we are forced to rely exclusively on the smaller and incomplete corpus of published vessels.7

In Parrot’s chapter on the pottery of the Palace (Parrot 1959: 114-45), he presents a number of illustrations of vessels and provides a short catalogue of vessels that include
illustrated forms as well as a few other specimens that are not illustrated. All of the
catalogued and illustrated vessels are intact pieces rather than fragments, although Parrot
himself admits that a great number of chipped and broken pots were found in the destruction
debris (Parrot 1959: 114). Nevertheless, he claims to have inventoried all of the main types
of vessels (Parrot 1959: 114).

All of the pottery from the Palace was found on the same floors as the tablets, which
have been dated to the period before the final destruction of the Palace. The year of the
Palace’s destruction by Hammurapi in 1761 B.C. provides a terminus ante quem for the
material (Parrot 1959: 114). There may be an occasional vessel that derives from an earlier
phase in the life of the palace. Parrot does not describe the stratigraphic details of the palace
in connection with the discovery of the pottery, so it is impossible to be sure about this
matter. In many cases, the catalogued vessels’ specific provenances within the palace are not
even indicated (Parrot 1959: for example, 128: M. 925 and M 924). To be on the safe side,
a broad date has been assigned for the pottery, which covers all of the Assyrian and Amorite
occupation from approximately 1815 B.C. to 1761 B.C. It is highly unlikely that any earlier
pottery would have survived in use to the end unless it was a prized heirloom; consequently
I hesitate to date any of the palace pottery to an earlier period.

Ishtar Temple Pottery. No known tablet fragments were found associated with the
domestic area immediately east of the Ishtar Temple precinct. The published pottery from this
area derives from domestic houses belonging to the uppermost occupation level, which Parrot
dates to the time of the Palace of Zimri-Lim (Parrot 1956: 224-32; figs. 108-110). Like the
Palace, the area ceased to be occupied after Hammurapi’s destruction of the city (Parrot 1956: 224). We argue that Parrot’s dating is justified based on the number and quality of analogous pottery forms observed between this area and the Palace. The exceptions are a few vessels that are certainly earlier (Parrot 1956: fig. 109: M. 916, M. 917, M. 918, M. 920), and must have come from deeper deposits or mixed contexts.

**Area E: Tablets.** Excavations within this building have yielded some inscriptive material dating to the early second millennium B.C. First, in a jar that was sealed beneath a mudbrick-tiled floor in a room designated as locus II, the excavators found pieces of tablets that the epigrapher (J.-M. Durand) has dated to the reign of Yahdun-Lim (Margueron 1987: 26). Second, four broken tablets were found in the room of locus I. Two of the tablets were found above the tiled floor of the room, one of which is dated to the reign of Zimri-Lim (Lebeau 1987: 443). Two other tablets with lāmu year-names from the reign of Shamshi-Adad were found in contexts that are thought to pre-date the laying of the tiled floor of locus I (Lebeau 1987: 443-44). In general, the textual information permits us to date the occupation of the large building in Area E from the beginning of the Amorite rule at Mari, under Yahdun-Lim, up to the destruction of the city by Hammurapi (Margueron 1987: 27). More specifically, the stratigraphic position of the dated tablets suggests that the tiled floors of loci I and II were laid down around the beginning of the reign of Zimri-Lim or perhaps slightly earlier (Lebeau 1987: 444). In summary, the building is roughly contemporary with the occupation of the Palace according to the inscriptive evidence.
**Area E Pottery.** Samples of the pottery found within the building of Area E are illustrated in a published article by M. Lebeau (Lebeau 1987). The pottery appears to be a fairly representative assemblage of common, undecorated pottery, including cooking pots, eating utensils and storage jars. All of the published vessels come from locus I of the building, above the tiled floor designated as C1. This is the same floor upon which they found tablets dating to the reign of Zimri-Lim, as described above. Based on this evidence, it is highly likely that the Area E pottery is contemporary with the pottery from the Palace of Zimri-Lim and the domestic area of the Ishtar Temple. Further confirmation of this synchronism is furnished by a comparative survey of the pottery from these areas. The significant number of analogous ceramic forms confirm that the three areas represent contemporary contexts.⁹

**Area A Texts, Level 2.** Several tablets and cylinder-seal impressions with inscriptions have been found in level 2 of the large “palace” of Area A. The largest cache of tablets, 63 in all, was found in Room XXIII while another 29 tablets were found in a passage between Room XV and II (Margueron 1984a: 10 and 19; Charpin 1985: 454). All are firmly associated with the occupation phase of level 2; that is, they were found directly above the baked-tiled floor that characterises this phase of occupation. Of the tablets, several were inscribed with year-names from the beginning of the reign of Zimri-Lim (Margueron 1984a: 10; Charpin 1985: 454).¹⁰ Many other tablets were inscribed with the name Asqudum, who is mentioned on tablets and cylinder seals from the Palace, and who is known to have been a diviner and servant of Zimri-Lim (Margueron 1984a: 19). The large corpus of tablets found
in level 2 of Area A is thought to represent Asqudum’s archive and suggests that he was the chief resident of this building during the reign of Zimri-Lim.

There are other texts from level 2 of the building, namely ten tablets found in Room XXI. They are dated to the period of the Assyrian rule at Mari (Charpin 1985: 455)\(^1\) and thus are somewhat earlier than the Asqudum archive, although still associated with the level 2 occupation. Based on this textual evidence, the second major occupation of the building in Area A may be dated to the reigns of Shamshi-Adad and Zimri-Lim, and thus is contemporary with the Palace occupation.

**Area A Pottery, Level 2.** Pottery from levels 1, 2 and 3 of the building in Area A has been published by Lebeau in a preliminary report (Lebeau 1983). In addition to illustrating some of the major forms, the author provides a comparative table (table 3) and a brief description of each of the illustrated vessels’ ware and decoration.

Figs. 2 and 3 (Lebeau 1983) illustrate the pottery excavated in level 2. Although not amounting to a very comprehensive collection of ceramic forms (only 19 vessel forms were drawn), numerous parallels between these vessels and those from the Palace, the Ishtar Temple area and Area E are instructive nonetheless.\(^2\) The successful ceramic comparisons between Area A’s level 2 and the other Mari contexts corroborate the dates provided by the tablets: Area A level 2 dates to the Amorite period, prior to the destruction of Mari by Hammurapi in 1761 B.C. and is contemporary with the other Mari contexts.

**Area A Texts, Level 3.** Establishing the date of the earliest level of occupation of the palace in Area A has been more problematic than the previously described contexts. This
phase, known as level 3, was found nearly empty with the exception of a small corpus of potsherds and a cache of cylinder-seal impressions. The largest cache of sealings, numbering more than 50, was found on the floor of Room VI near a door socket. The backs of the sealings bear the impressions of rope, indicating that the door giving access into Room VI was probably sealed on a regular basis, and that the room itself served as a storage facility for some important material (Beyer 1983: 52).

Several of the sealings from this early phase depict individuals performing a libation rite in front of a deity wearing a horned cap and often holding what appears to be a thunderbolt. The deity is presumed to be the goddess Lama (Beyer 1983: 53; figs. 9-10). On one such sealing there is an inscription that reads “Puzur-Ishtar, Shakanaku of Mari” (Beyer 1983: 54 and fig. 11). In addition, a tablet found in Room VI is inscribed with the name of Hitlal-Era, the son of Puzur-Ishtar (Margueron 1984a: 10 and 21).

From these inscriptions, it would appear that a shakanaku named Puzur-Ishtar and his son had both resided at the Area A building probably only shortly before the end of this first phase of occupation, given that the inscriptions were found on the highest plastered floors of level 3 (Beyer 1983: 55). Little is still definite about the exact period of time when the shakanakus of Mari reigned, although current research suggests that they governed as early as the Akkadian period and continued to exercise their authority until the advent of the Amorite dynasty around 1815 B.C. In support of this late presence of the shakanaku is J.-R. Kupper, who has studied the shakanaku inscriptions and sealings from the Palace of Zimri-Lim and has concluded, based on epigraphic, stylistic and iconographic criteria, that a great number of the shakanakus ruled as late as the beginning of the 1st Dynasty of Babylon (Beyer
1983: 55; Kupper 1971: 113-18). More recently, Durand has reached a similar conclusion and considers the inscriptions from Area A to be dated to this late time period (Durand 1985: 166-68). Contrary to these studies, however, is the evidence that an individual by the name of Puzur-Ishtar ruled as shakanaku at Mari during the reigns of the Ur III kings Shulgi and Shu-Sin (2094-2029 B.C.) (Beyer 1983: 55). Finally there is Beyer’s suggestion that there were two individuals by the name of Puzur-Ishtar, one ruling during the Ur III period, and the other living at the beginning of the Old Babylonian period and responsible for the inscriptions left in level 3 of Area A (Beyer 1983: 55).

Area A Pottery, Level 3. The epigraphic, stylistic and iconographic parallels between the sealings of level 3 of Area A and those of level 2 suggest that level 3 cannot represent occupation much earlier than level 2 (Beyer 1983: 55; Durand 1985: 166-68). The pottery from level 3 supports this dating owing to numerous parallels with the pottery of the Palace of Zimri-Lim, the Ishtar Temple area and Area E, as the following table indicates:
Table 15: Parallels between the Pottery from Area A, level 3 and the Mari Palace, the Ishtar Temple and Area E

The parallels listed above strongly suggest that the vessels from level 3 belong within the same period as the other second-millennium B.C. pottery vessels excavated at Mari. Only two of the forms resemble pottery that characterizes Early Bronze contexts at the site. Thus, it is highly likely that level 3 was not occupied much earlier than the succeeding level 2 and that it belongs within the Middle Bronze period. Because of this evidence, one can probably reject the Ur III date for level 3, proposed on account of shakanaku inscriptions that record the name of Puzur-Ishtar. Rather, the evidence concurs with Durand’s hypothesis that the shakanakus governed as late as the Old Babylonian period and that there were two shakanakus named Puzur-Ishtar at Mari. Presumably, it was the second Puzur-Ishtar who left his inscriptions in the building of level 3 and who governed at Mari only shortly before the establishment of Amorite power at the city.
**Area A Pottery, Level 1 and Tombs.** Finally, in Area A, there is the pottery from level 1, which is said to represent the vessels associated with the squatter or small village occupation shortly after the destruction of the city by Hammurapi in 1761 B.C. (Beyer 1983: 58). There is also the published pottery from graves 1, 3, 8, 9, 18 and 19, which were also found in Area A. According to the stratigraphic information provided (Beyer 1983: 43, table 1), these tombs were dug from layers contemporary with levels 1 (Tombs 1 and 3) and 2 (Tombs 8, 9, 18 and 19). Again, the numerous pottery parallels between these contexts and the contexts known to date to the period of Shamshi-Adad and Zimri-Lim (Zimri-Lim Palace, Ishtar Temple precinct and Area E) suggests that they were not far removed in time from one another:

<table>
<thead>
<tr>
<th>Number</th>
<th>Area A, level 1 (all Lebeau 1983)</th>
<th>Le Palais (Parrot 1959); Le Temple d’Ishtar (Parrot 1956); Area E (Lebeau 1987)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>fig. 1 no. 1</td>
<td>Lebeau 1987: pl. VI no. 3</td>
</tr>
<tr>
<td>2</td>
<td>fig. 1 no. 2</td>
<td>Parrot 1959: fig. 89 bottom of fig</td>
</tr>
<tr>
<td>3</td>
<td>fig. 1 no. 3</td>
<td>Parrot 1956: fig. 110 nos. 923 and 930</td>
</tr>
<tr>
<td>4</td>
<td>fig. 1 no. 4</td>
<td>Lebeau 1987: pl. I no. 15</td>
</tr>
<tr>
<td>5</td>
<td>fig. 1 no. 5</td>
<td>Parrot 1956: fig. 110 no. 921; Lebeau 1987: pl. II no. 8, pl. VI no. 1</td>
</tr>
<tr>
<td>6</td>
<td>fig. 1 no. 7</td>
<td>Lebeau 1987: pl. VI no. 6</td>
</tr>
<tr>
<td>7</td>
<td>fig. 1 no. 8</td>
<td>Parrot 1959: fig. 108 no. 947</td>
</tr>
<tr>
<td>8</td>
<td>fig. 1 no. 9</td>
<td>Parrot 1956: fig. 108 nos. 911 and 946; Parrot 1959: fig. 87 nos. 895 and 886; Lebeau 1987: pl. IV nos. 8-16</td>
</tr>
</tbody>
</table>

Table 16: Parallels between the Pottery from Area A, level 1, and the Mari Palace, the Ishtar Temple and Area E
<table>
<thead>
<tr>
<th>Number</th>
<th>Area A, Tombs (all Lebeau 1983)</th>
<th>Le Palace (Parrot 1959); Le Temple d'Ishtar (Parrot 1956); Area E (Lebeau 1987)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tomb 3, fig. 6</td>
<td>Parrot 1959: fig. 83 no. 898</td>
</tr>
<tr>
<td>2.</td>
<td>Tomb 1, fig. 7 no.1</td>
<td>Parrot 1959: fig. 88 no. 915; Parrot 1956: fig. 109 nos. 939, 913, and 912; Lebeau 1987: pl. VI nos. 9-12</td>
</tr>
<tr>
<td>3.</td>
<td>Tomb 18, fig. 7 no.2</td>
<td>Lebeau 1989: pl. VI no. 3</td>
</tr>
<tr>
<td>4.</td>
<td>fig. 7 no. 3</td>
<td>Parrot 1959: fig. 88 no. 915; Parrot 1956: fig. 109 nos. 939, 913 and 912; Lebeau 1987: pl. VI nos. 9-12</td>
</tr>
<tr>
<td>5.</td>
<td>fig. 7 no. 4</td>
<td>Parrot 1959: fig. 88 no. 874</td>
</tr>
<tr>
<td>6.</td>
<td>Tomb 9, fig. 8 no.1</td>
<td>Parrot 1956: fig. 108 no. 946; Lebeau 1987: pl. VI no. 16</td>
</tr>
<tr>
<td>7.</td>
<td>fig. 8 no. 2</td>
<td>Parrot 1959: fig. 88 no. 915; Parrot 1956: fig. 109 nos. 939, 913 and 912; Lebeau 1987: pl. VI nos. 9-12</td>
</tr>
<tr>
<td>8.</td>
<td>Tomb 8, fig. 8 no.3</td>
<td>Parrot 1959: fig. 88: no. 915; Parrot 1956: fig. 109 nos. 939, 913 and 912; Lebeau 1987: pl. VI nos. 9-12</td>
</tr>
<tr>
<td>9.</td>
<td>fig. 8 no. 4</td>
<td>Parrot 1959: fig. 87 no. 887</td>
</tr>
<tr>
<td>10.</td>
<td>Tomb 19, fig. 9 no.2</td>
<td>Lebeau 1989: pl. II nos. 9-10</td>
</tr>
</tbody>
</table>

Table 17: Parallels between the Pottery from Tombs 1, 3, 8, 9, 18 and 19, Area A, and the Mari Palace, the Ishtar Temple and Area E

Particularly notable among these contexts is the presence of flared-rim goblets (Numbers 2, 4, 7-8 in Table 17 above). They have been encountered in the Zimri-Lim Palace, the Ishtar Temple area and Area E, as well as in tombs 1, 8, 9, and 18 in Area A. All are characterized by short, flaring rims and small, disc bases. One can observe no detectable development in the form of this vessel type in the Mari tombs, unlike the changes documented at other post-Mari levels from other sites within the vicinity (see Tell Ashara/Terqa and Khirbet ed-Diniyeh/Haradum below). The lack of development among other vessel types, as well,
strongly suggests that the level 1 occupation could not have continued long after the level 2 occupation was abandoned, perhaps only a few years.

Area of the Temples of Ishtarat and Ninni-zaza. Finally, there is a small corpus of illustrated pottery that derives from a second-millennium domestic context in the area of the Ishtarat and Ninni-zaza temples (Parrot 1967: fig. 304). A few parallels can be made between this pottery and pottery from other Middle Bronze contexts at the site. Also, Parrot claims that large storage jars found within this domestic area are interchangeable with the ones from the Zimri-Lim Palace (Parrot 1967: 288). In any event, there is no evidence to suggest that this was a post-destruction squatter area, nor do any of the vessel profiles have any strong analogies with pottery from Early Bronze Age contexts at the site. Consequently, I feel confident in dating the pottery from this context to the first half of the 18th century B.C., and within the Middle Bronze Age tradition.

Summary of Mari’s Internal Sequence. To conclude, all of the pottery from the Palace of Zimri-Lim, the area around the Ishtar Temple, Area E, Area A, level 2, and probably the area of the temple of Ishtarat and Ninni-Zaza, is roughly contemporary and dates to the period prior to Mari’s destruction in 1761 B.C. Textual evidence in the form of tablets and sealings inscribed with names and events from of Shamshi-Adad and Zimri-Lim corroborate this evidence. Level 1 and some of the tombs of Area A are thought to date after the destruction of the settlement in 1761 B.C., but the pottery has so many similarities with the pre-destruction pottery that one doubts that the contexts date much later than 1761, perhaps
20-30 years or less. The earlier level 3 of Area A, also because of its parallels with the pottery from the Shamshi-Adad/Zimri-Lim period, is thought to date only slightly earlier.

<table>
<thead>
<tr>
<th>circa. 1900-1816 B.C.</th>
<th>1815-1761 B.C.</th>
<th>1760-1740 B.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area A, level 3</td>
<td>Zimri-Lim Palace, Ishtar Temple, Area A level 2, Area A Tombs 8, 9, 18 and 19, Area E and Area of Ishtarat and Ninni-Zaza Temples</td>
<td>Area A, level 1 and Tombs 1 and 3</td>
</tr>
</tbody>
</table>

Table 18: Suggested Internal Chronological Sequence at Mari and Associated Absolute Dates

Relative Dates of other Mari Sites.

The following study determines how sites within the Mari region correlate with the second-millennium B.C. occupation represented at Mari, on the basis of inscriptive information and comparisons among the pottery assemblages. The study focuses first on the sites of Tell Ashara/Terqa and Khirbet ed-Dinyyeh/Haradum, for which there is the greatest amount of textual and ceramic material, and then follows with a discussion of the sites of Baghouz and Tell Mohasan, which have yielded smaller quantities of artifactual material.

Tell Ashara/Terqa

Most of the textual and ceramic material for the second-millennium B.C. occupation at Terqa derives from the first four seasons of excavations in Area C (Buccellati and Kelly-Buccellati 1977: 1978-79; 1979; Rouault 1984) and the excavations of Area F, which are reported in D. Buia's doctoral dissertation (Buia 1993). In both areas, tablets and pottery have been uncovered in a sequence of stratified contexts that appear to be contemporary with or later than the Mari occupation in the first half of the 18th century B.C.
Terqa Area F: Textual Sources. At the time of Buia’s study of Area F, 36 complete tablets and 41 tablet fragments had been uncovered in Area F (Buia 1993: 8). The contents of the tablets assisted in dating each of the phases. One of the tablets, which was found in a storage bin in the “scribal installation”of phase 6, bears a month-name associated with the reign of Shamshi-Adad. Consequently, that phase was assigned to the Assyrian period, and described as the Early Mari Period (Buia 1993: 39). Tablet fragments found in phase 5 date to the governorship of Kibri-Dagan, a contemporary of Zimri-Lim. Buia describes this phase as the Late Mari Period (Buia 1993: 33). Phases 4 and 3 of Area F yielded no tablets, but their stratigraphic position above phase 5 requires that they are later in date than the period of Zimri-Lim. Buia has assigned the scanty remains of phase 4 to the short Old Babylonian occupation at Terqa after the destruction of Mari by Hammurapi, while phase 3 has been assigned to the subsequent Khana period and is thought to co-incide with the occupation of the House of Puzurum in Area C (Buia 1993: 23-29).

Terqa Area F: Pottery. An independent study of the pottery from Area F was conducted in order to verify the dating established on the basis of the textual evidence.

In her catalogue of the archaeological material from Area F, Buia separated the pottery into each of the phases from which it was excavated. She then classified the sherds according to their fabric in descending order of frequency in conjunction with basic form/functional categories consisting of bodysherds, bases, goblets, bowls, jars, platters and pots (Buia 1993: chapter 8). In phase 3, for example, the form “jar” appears most frequently in fabric #2, followed in descending order by fabrics #4, #7 and #3 (Buia 1993: 293). Thus,
all phase 3 jar sherds of fabric #2 were catalogued first, followed by jars belonging to the other fabrics. This is also the order in which the individual sherds were illustrated.

There are several problems with Buia’s presentation of the pottery. First, there is a discrepancy in the quantities of diagnostic sherds that were initially tabulated and the number of sherds that were actually drawn and catalogued. For example, according to the tables found on pages 275-77 of Buia’s dissertation, phase 5 is represented by 139 bases, 29 goblets, 303 bowls, 250 jars, 52 platters and 54 pots (= 827 sherds). One finds, however, different quantities of sherds in the descriptive catalogue and the illustrations. For example, the phase 5 goblet rims that were drawn and catalogued are said to represent a total of 42 goblets, not 29, as was previously reported. Conversely, only 27 of the previously counted 54 pots were catalogued. Because of such discrepancies, I opted to rely exclusively on the catalogued examples, along with the stated number of sherds represented by each of the illustrations, and not the sherd totals provided in the earlier tables of chapter 7.

The second problem relates to the presentation of the diagnostic sherds by fabric. In such a scheme, sherds that possess the same overall characteristics of forming but different fabrics are separated from one another in the catalogue and illustrations. This typology does not facilitate the observation of changes or developments of the types of ceramic forms over time. I argue that the classification of ceramics by form and stylistic characteristics tends to reflect more accurately “real” ancient categories than fabric and documents changes over time more sensitively than changes in fabric. The failure of a classification based on fabric distinctions is exemplified by the doctoral study of Buia herself, since she was unable to make any significant statements about ceramic change over time through her fabric typology.
Because of the difficulty with Buia’s presentation, I decided to re-arrange the diagnostic sherds into groups based on similar forms within each of the general vessel categories. Such a typology facilitated comparisons between the Terqa pottery and other sites’ assemblages, all of which have been sorted primarily by forming characteristics as opposed to fabric.

One of the positive features of Buia’s pottery catalogue is that she has indicated the number of specimens that are represented by each of her illustrated examples. Thus in the re-arranged classification of the pottery by form, one can follow the growth or decline in frequency of particular sherd types through each of the occupation phases. Such frequency data are clearly more accurate than observations of the mere presence or absence of particular forms, and can refine chronological correlations between Terqa and Mari.

In order to establish a chronological correlation between Mari and Terqa on the basis of their pottery assemblages, the approach used here involves selecting diagnostic categories that represent the pottery at Mari and consequently finding parallels from the phases within Terqa’s Area F corpus. The phase/phases that have yielded the highest frequency of pottery similarities with the pottery from Mari are considered to be the closest in date to the Mari occupation.

Table 19 lists the pottery categories selected from the Mari ceramic corpus (Types 1-18), together with analogies from each of the phases of Area F at Tell Ashara/Terqa.
<table>
<thead>
<tr>
<th>Type</th>
<th>Mari Area E (Lebeau 1987); Area A (Lebeau 1983); Le Temple d’Ishtar (Parrot 1956); Le Palais (Parrot 1959); Ishtarat and Ninni-zaza (Parrot 1967)</th>
<th>Terqa Area F, phase 6 (Buia 1993)</th>
<th>Terqa, Area F, phase 5 (Buia 1993)</th>
<th>Terqa, Area F, phase 4 (Buia 1993)</th>
<th>Terqa, Area F, phase 3 (Buia 1993)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.</td>
<td>Lebeau 1987: pl. V:4-9</td>
<td>figs. 164:c, d(2)</td>
<td>figs. 114:c-d, 132:f, 133a-b</td>
<td>fig. 90</td>
<td>figs. 57:a, 67:d</td>
</tr>
</tbody>
</table>
Table 19: Analogies between the pottery from pre-destruction contexts at Mari and phases 3-6 of Area F, Tell Ashara/Terqa

The occurrences of the Terqa sherds within each category per phase may be expressed in terms of percentages of the total number of diagnostic sherds for each phase of Area F, as in Table 20:

<table>
<thead>
<tr>
<th>Type</th>
<th>Terqa, Area F, phase 6</th>
<th>Terqa, Area F, phase 5</th>
<th>Terqa, Area F, phase 4</th>
<th>Terqa, Area F, phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>5/291 = 1.7%</td>
<td>2/407 = .50%</td>
<td>0/104 = 0%</td>
<td>1/261 = .40%</td>
</tr>
<tr>
<td>2.</td>
<td>3/291 = 1.0%</td>
<td>19/407 = 4.6%</td>
<td>0/104 = 0%</td>
<td>1/261 = .40%</td>
</tr>
<tr>
<td>3.</td>
<td>5/291 = 1.7%</td>
<td>5/407 = 1.2%</td>
<td>1/104 = 1.0%</td>
<td>2/261 = .80%</td>
</tr>
<tr>
<td>4.</td>
<td>6/291 = 1.0%</td>
<td>1/407 = .25%</td>
<td>3/104 = 2.9%</td>
<td>2/261 = .80%</td>
</tr>
<tr>
<td>5.</td>
<td>4/291 = 1.3%</td>
<td>17/407 = 4.2%</td>
<td>2/104 = 1.9%</td>
<td>2/261 = .80%</td>
</tr>
<tr>
<td>6.</td>
<td>6/291 = 2.0%</td>
<td>7/407 = 1.7%</td>
<td>1/104 = 1.0%</td>
<td>1/261 = .40%</td>
</tr>
<tr>
<td>7.</td>
<td>0/291 = 0%</td>
<td>0/407 = 0%</td>
<td>1/104 = 1.0%</td>
<td>5/261 = 1.9%</td>
</tr>
<tr>
<td>8.</td>
<td>1/291 = .30%</td>
<td>41/407 = 10.0</td>
<td>0/104 = 0%</td>
<td>1/261 = .40</td>
</tr>
<tr>
<td>9.</td>
<td>2/291 = .70%</td>
<td>1/407 = .25%</td>
<td>0/104 = 0%</td>
<td>0/261 = 0%</td>
</tr>
<tr>
<td>10.</td>
<td>2/291 = .70%</td>
<td>6/407 = 1.8%</td>
<td>5/104 = 4.8%</td>
<td>2/261 = .80%</td>
</tr>
<tr>
<td>11.</td>
<td>2.291 = .70%</td>
<td>3/407 = .70%</td>
<td>1/104 = 1.0%</td>
<td>1/261 = .40%</td>
</tr>
<tr>
<td>12.</td>
<td>2/291 = .70%</td>
<td>4/407 = 1.0%</td>
<td>1/104 = 1.0%</td>
<td>2/261 = .80%</td>
</tr>
<tr>
<td>13.</td>
<td>3/291 = 1.0%</td>
<td>16/407 = 4.0%</td>
<td>0/104 = 0%</td>
<td>1/261 = .80</td>
</tr>
<tr>
<td>14.</td>
<td>3/291 = 1.0%</td>
<td>2/407 = .50%</td>
<td>1/104 = 1.0%</td>
<td>1/261 = .80%</td>
</tr>
</tbody>
</table>
Table 20: Percent occurrences of analogous Terqa sherds within Phases 6-3 of Area F, at Tell Ashara/Terqa

Finally, these frequencies per phase can be illustrated as bar graphs, as shown in Table 21.

The results of the pottery frequencies from Area F, Terqa are conclusive. First, one may observe of the bar graphs in Table 21 that almost all of the sherd types possess a single peak of popularity in one of the phases, with lesser frequencies on either side. This tendency concurs with the observation that most ceramic types follow a pattern of increase and decrease in frequency through time. We will not concern ourselves here with a discussion of the causes of this kind of pattern, only to state that most pottery assemblages throughout the world seem to follow this trend. In Area F, the exceptions to the general increase-decrease pattern are Types 4 and 14, which have two peaks of popularity. Such types are obviously not good chronological indicators since one can not state with assurance when the vessels were most heavily produced and used. It is conceivable that the life spans of Types 4 and 14 are much longer than the extent of the phases represented at Terqa, and that given more data over an extended period of time, true growth and fall-off patterns can be recognized for these categories.

Interestingly, Type 14 represents the diagnostic rims of the so-called “lentoid flask” which appears at a number of Middle Bronze Age sites in the Euphrates region. In his
Table 21: Frequency of Vessel Types in Phases 6-3 of Area F, Tell Ashara/Terqa
criticism of the dating of Terqa, Jonathan Tubb argues that the co-occurrence of the lentoid flask at Mari, Baghouz and within Area C at Terqa confirms the contemporaneity of these three sites (Tubb 1980: 65-66). The findings above, however, suggest that, among the various diagnostic categories, the lentoid flask does not represent a reliable chronological indicator for a specific phase of the Middle Bronze Age. It would appear to have a fairly long life span, and consequently represents precisely the kind of type that on its own, cannot be used to establish the contemporaneity of sites. Indeed, the co-occurrence of the lentoid flask at both Mari and Area C of Terqa confirms its weakness as chronological marker, since Area C almost certainly represents a later period of time than the Middle Bronze occupation at Mari (see date of Area C below).

Most Mari types (12 out of 18) occur with highest frequencies in phases 5-6 of Area F, suggesting that these phases are contemporary with the occupation at Mari. This would certainly support the textual evidence from phases 5-6, which on epigraphic grounds dates to the period of Shamshi-Adad and Zimri-Lim of Mari. Of the two phases, phase 5 has higher quantities of sherds within the individual types (35.86% of the total sherds) than phase 6 (19.62%). Thus the ceramic data from Area F suggest that phase 5 at Terqa is probably the closest in date to the pre-destruction occupation at Mari.

Two diagnostic types possess highest frequencies in phase 4 (Types 10 and 11), while the remaining two have their highest occurrences in phase 3 (Types 7 and 15). Of these latter sherd types, it is significant to note that one of them (Type 15) represents the flared-rim goblet. In Area F, this vessel type has a dramatic rise in frequency, increasing from only 1.7% of the total assemblage in phase 6 and 1.5% in phase 5, to 3.8% in phase 4 and to an
impressive 16% of the total assemblage of phase 3. If any type is a good diagnostic indicator of the later periods at Terqa, it would seem to be this one. Significantly, the flared-rim goblet is the same vessel type that was designated Type C99 among the “Big Bend” Euphrates vessels. On the basis of the “Big Bend” evidence, I concluded that C99 first appears at the beginning of the second half of the Middle Bronze Age (Transitional MBIIA/MBIIB). Given the current evidence, the flared-rim goblet appears to be an important chronological tool for all of the Euphrates region in Syria, and will be discussed in this light in greater detail later on in the discussion.

The most chronologically sensitive diagnostic type among those represented in the frequency tables appears to be Type 16. This type occurs only in phase 5, where it is represented by 6 specimens. The type characterizes any form of vessel whose outer surface has been painted with simple bands of bitumen paint. This is not to be confused with potter’s symbols, also executed in black bitumen. Most of the examples of Type 16 have black bitumen bands applied to the top or outer edge of the rim.

To summarize, a study of the pottery frequencies of various diagnostic types at Area F at Terqa demonstrates that the pottery from phase 5 compares most favourably with the pottery from Mari. Based on this evidence, I suggest that phase 5 is probably contemporary with the final occupation at Mari. This conclusion certainly supports the dates established on the basis of the textual evidence. Both phase 5 and 6 contain tablets that can be dated prior to the destruction of Mari. Phases 4 and 3 at Terqa probably represent periods of occupation occurring after Hammurapi’s destruction of Mari.
Terqa Area C, Textual Sources. One of the most noteworthy discoveries at Terqa was a domestic context in Area C in the southern sector of the mound. Scores of tablet fragments, envelopes and clay bullae were found lying on the floor of a room (STCA1) within a large house designated as STCA. While this room has been called a table "archive," the setting was in fact not archival at all:

The tablets were not stored properly, but rather tossed among a variety of other artifacts. The documents were at best in dead storage, and seem to have lost all current value by the time they were placed, or apparently thrown in this room. ... If the term "archive" can be used, it is primarily because the documents are in fact related to each other typologically, and only secondarily because they were found stored together, even if scattered about, in the same room (Rouault 1984: xii).

The tablets were well preserved because the entire house had been engulfed in a violent fire that caused the collapse of the roof. Apparently, no one searched through the debris after the fire to recover any of the documents, even though a subsequent re-use of the room is well documented (Rouault 1984: xii).

The bulk of the tablets consists of sale contracts of one individual by the name of Puzurum, son of Namīšum. It is because of the frequency of his name that the tablets within the room were called the "archive" of Puzurum and the building to which the "archive" belonged was called the "house" of Puzurum (Rouault 1984: viii).
The majority of tablets of Puzurum were written in the time of Yadih-Abu, a king of the Khana dynasty at Terqa who ruled during the reign of Samsu-iluna of Babylon (circa. 1725 B.C.). This synchronism is based on a report in a tablet written in the 28th year of the reign of Samsu-iluna, of a Babylonian victory over Yadih-Abu of the kingdom of Khana (Ungnad 1938: 184, no. 173). The latest tablet from the room comes from the reign of Kaštiliašu, who succeeded Yadih-Abu, and who probably ruled at Khana around 1700 B.C. It was around this time that the archive room was burned and sealed by roof collapse.

The inscriptionsal evidence from House STCA in Area C establishes that its occupation dates to a period of time after the destruction of Mari between 1725-1700 B.C. Thus, all of the other archaeological material that comes from the same phase and context as the tablets, must also date to this period.

**Terqa Area C: Pottery.** The only published pottery from Area C is a report on the first two seasons of excavations from this area (Kelly-Buccellati and Shelby 1977). The relevant material consists of a total of 55 second-millennium B.C. vessel types comprising wholly intact specimens. Illustrations of these vessels are provided in the report, as is information concerning the provenance of the pots, measurements and ware descriptions.

Most of the pots from Area C were found on the floor under burned debris within a room that was originally designated as ST4 (level 15). In subsequent years, the excavators discovered that this “storeroom” was part of the same house as the Puzurum archive room (House STCA), and that their floors were contemporary and had been sealed by destruction debris resulting from the same conflagration event. Thus the pottery found upon the floor of room ST4 (later designated as STCA3) is contemporary with the tablets of Puzurum. Other
vessels in the published report, which were found in levels of re-occupation and burials, were located stratigraphically above this destruction horizon. Therefore none of the pottery from Area C is contemporary with the occupation at Mari; rather, it represents an assemblage that dates later than 1725 B.C. Based on these findings, one must reject Tubb’s assertion that the pottery from the tombs and the storeroom of Area C (SG 2-4) are contemporary with the pottery from Mari (and Baghouz) and his conviction that they date to the beginning of the Middle Bronze Age (Tubb 1980: 66).

In support of the assertion that the published pottery from Area C is later than the pottery from Mari is the comparatively low degree to which the corpus has parallels with the Mari assemblage. There are certainly fewer parallels than were established between Area F phases 6-5 and Mari. The impression of the Area C published pottery is that it reflects the general character of a Syrian Middle Bronze assemblage, but that specific parallels in the Mari assemblage are few. Table 22 lists these parallels:

<table>
<thead>
<tr>
<th>Type</th>
<th>Mari Le Palais (Parrot 1959); Temple d’Ish tar (Parrot 1956); Ish tarat and Ninni-zaza (Parrot 1967); Area A (Lebeau 1983); Area E (Lebeau 1987)</th>
<th>Terqa, Area C (Kelly-Buccellati and Shelby 1977)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Parrot 1959: fig. 89: 3rd row, left side (bowl has pedestal base)</td>
<td>fig. 7, TPR 4 3 (same rim, but with solid base)</td>
</tr>
<tr>
<td>2.</td>
<td>Parrot 1956: fig. 108: 901</td>
<td>fig. 11, TPR 4 16</td>
</tr>
<tr>
<td>3.</td>
<td>Parrot 1959: fig. 84: 857</td>
<td>fig. 11, TPR 4 18 (lentoid flask)</td>
</tr>
<tr>
<td>4.</td>
<td>Parrot 1956: fig. 106: 872</td>
<td>fig. 14, TPR 4 26</td>
</tr>
<tr>
<td>5.</td>
<td>Parrot 1956: fig. 109: 939, 913, 912; Lebeau 1983: fig. 7:1</td>
<td>fig. 20, TPR 4 46; fig. 21, TPR 4 47 (flared-rim goblet)</td>
</tr>
</tbody>
</table>

Table 22: Parallels between the pottery from the pre-destruction contexts at Mari and Area C, Terqa

Of the table above, it is not surprising to find lentoid flasks in Area C (no. 3 in table 22), since this form also appears in levels 3 and 4 of Area F. We have already suggested that
such a vessel has a long life span, extending throughout the Middle Bronze phases of the Mari region. Thus its presence in both Area C at Terqa and at Mari does not necessarily indicate the contemporaneity of these two sites (contra Tubb 1980: 65-66).

Two parallels to the flared-rim goblet encountered at Mari are illustrated among the Area C corpus (no. 5 in table 22). One of these goblets was excavated in the earliest occupational stratum in Area C (SG 4, level 15). In subsequent levels, the number of goblets increases and develops into a variety of forms, some with longer flaring rims, some with squat bodies and some with nipple bases or raised, solid bases rather than low, disc bases (see for example, Kelly-Buccellati and Shelby 1977: fig. 19: TPR 4 42, TPR 4 44; fig. 20: TPR 4 44j, TPR 4 45; fig. 21: TPR 4 48, TPR 4 49, TPR 4 50). The development of this goblet, from one consistent form to a large number of divergent forms, repeats the pattern observed in Area F after phases 6 and 5. The same pattern is also duplicated at the site of Khirbet ed-Diniyeh, as will be shown below. The prominence and diversity of this goblet in the levels of Area C does not compare favourably with the evidence from Mari, where all of the flared-rim goblets are characterized by the one consistent form. This difference further supports the assertion that Area C and the Mari occupation are not contemporary. Rather, the evidence suggests that the occupation of Area C should be assigned to a later, more developed phase of the Middle Bronze Age.

In summary, an analysis of Terqa’s Area C pottery suggests that Area C probably dates to a later period than the pre-destruction occupation at Mari. This dating is confirmed by the tablets from the archive of Puzurum, which were found on the same floors as the
pottery and which have been dated to the so-called Khana period, falling around the end of the 18th century B.C.

**Khirbet ed-Diniyeh/Haradum**

Archaeological material in the form of tablets and pottery from Khirbet ed-Diniyeh has made it possible to date the site’s second-millennium sequence of occupation and to establish its chronological position relative to the occupation at Mari.

**Khirbet ed-Diniyeh/Haradum Textual Sources.** Several cuneiform tablets were uncovered at the site in the course of excavations. The tablets, which are primarily administrative and economic records and letters, are associated with levels 3C, 3B2, 3B1 and 3A. Several of the tablets bear the year-names of the Babylonian kings Samsu-iluna, Ani-Ešuh, Amiditana and Ammisaduqa (Kepinski-Lecomte 1992: 31-36) and permit the dating of the levels as follows:

- **3C:** 1725-1690 B.C.
- **3B2:** 1690-1675 B.C.
- **3B1:** 1675-1650 B.C.
- **3A:** 1668-1628 B.C. (Kepinski-Lecomte 1992: 36)

None of the excavated tablets are associated with the earliest level, 3D, which must date sometime before 1725 B.C. Tablets from Mari that are dated to the reign of Zimri-Lim, however, frequently mention the town of Haradum in connection with activities in the province of Suhu. One of the letters, for example, reports the movements of the army of Eshnunna near Haradum. It was written by a general who was stationed at ‘Ana (Hanat) in year 3 of the reign of Zimri-Lim (Kepinski-Lecomte 1992: 30-31). It is this textual evidence
that prompted the excavators to push the date of Khirbet ed-Diniyeh/Haradum back to the beginning of the reign of Zimri-Lim, and to equate the earliest phase, 3D, with that period. If this synchronism is accurate, then the earliest level at Khirbet ed-Diniyeh is contemporary with the occupation at Mari before 1761 B.C.

**Khirbet ed-Diniyeh/Haradum Pottery.** Pottery excavated at the site of Khirbet ed-Diniyeh, ancient Haradum, is published in the first volume of the Haradum final report (Kepinski-Lecomte 1992). The illustrated and catalogued pots in the report comprise rims, bases and decorated body sherds, which are classified into types on the basis of general form-functional distinctions. These types are in turn divided into smaller sub-types on the basis of more specific form and size characteristics. Drawings of individual specimens within each sub-type are presented according to the level in which they were found at the site (levels 3D-3A). Furthermore, the percentage frequency of each sub-type relative to the total number of sherds found within the individual phases is expressed in tables. Other information about forming techniques, paste colour, slip colour, temper and decoration are provided in the catalogue for each drawn vessel as well as references to sites that have comparable vessels.

Given this clear and quantified presentation of the pottery, it was assumed that establishing the chronological position of Khirbet ed-Diniyeh relative to Mari would be a reasonably straightforward exercise. Furthermore, it was expected that the same categories of diagnostic sherds that had established the relative chronology for Mari and Tell Ashara/Terqa could also be used to calculate Mari's relationship with Haradum.

Unfortunately, several difficulties were encountered. The chief difficulty was understanding the reasoning behind the classification of certain sherds within some of the
diagnostic categories. Some of the sherds, for example, possess rim characteristics or other forming features that, according to the drawings, do not correspond convincingly with the other illustrated sherds of the same sub-types. For example, a sherd with a rolled, rounded rim profile belonging to sub-type 2.2 (Kepinski-Lecomte 1992: fig. 62: 4), seems at odds with the angular rim profiles of the remaining sherds of the sub-type (Kepinski-Lecomte 1992: fig. 62: 5-6). Another example concerns the bowls of sub-type 18.6 (Kepinski-Lecomte 1992: fig. 110: 1-4). While the bowl rims of fig. 110: 2-4 appear to be grouped together satisfactorily, fig. 110: 1 seems out of place. Unlike the other sherds, its inner rim edge is dropped and oblique, and the overall form of the bowl is more graceful and finely executed. The base is missing. Significantly, vessels with rim profiles analogous to this specimen have been found at both Mari and Baghouz, where they are characterized by pedestal bases (Parrot 1959: fig. 89, 3rd row, Ist on left; du Mesnil du Buisson 1948: pl. LXXIX: 212). If a pedestal base also characterizes the vessel form of fig. 110: 1 from Haradum, it would clearly constitute a different category than the other vessels of type 18.6, which are characterized by low, disc bases (fig. 110: 2).

Because of these kinds of classification problems, it was often difficult to accept the frequency tables without qualifications. How could the percentage occurrence of the sub-types within the individual levels be accepted when there was disagreement about the presence of some of the vessels within those sub-types? To exacerbate the difficulty was the fact that the frequency data also included a number of undrawn vessel fragments whose correct classification could not be verified.
In light of the problems with the published data, the establishment of Khirbet ed-Diniyeh’s date relative to Mari was carried out according to the following considerations:

a) Frequencies of sherds of a particular sub-type within the various levels of occupation have only been considered in instances where there is agreement with the author’s classification of that sub-type (i.e. that all of the forms illustrated are thought to comprise a reasonably analogous sherd grouping). In such instances, it is presumed that the undrawn examples have also been correctly classified within the appropriate groupings. The frequency data have been assessed in the same manner as at Tell Ashara/Terqa: levels with the highest frequency of sub-types analogous to diagnostic sherd categories from Mari are thought to be closely contemporaneous with the Mari occupation associated with those sherds.

b) Where there has been a disagreement with the author’s typology, one cannot make use of the frequency tables. This is because the quantified data may combine the frequencies of significantly different sherd types. In these cases, chronological correlations between Mari and Haradum have been based only on analogies among single, drawn examples and a record of their associated occupation levels.

Some of the categories of sherds that were used to establish Terqa’s chronological position relative to Mari are not present at Khirbet ed-Diniyeh, and thus cannot be applied to determine Khirbet ed-Diniyeh’s chronological position to Mari. In their place are other sherd types with parallels to the Mari corpus. These differences among the pottery assemblages within the Mari region may be attributed to the geographical distance separating the sites. Terqa and Khirbet ed-Diniyeh are located at the northern and southern limits of the southern Euphrates region of Syria (the sites are approximately 170 km apart). Although aspects of
both of their assemblages are likely to overlap at Mari in its central geographic position in this region, the two sites would not be expected to share all ceramic stylistic features between themselves given the geographic distance separating them.

The following tables list Mari sherd types that have analogies at Khirbet ed-Diniyeh. **Table 23** lists each of comparable sub-types from Khirbet ed-Diniyeh followed by a record of the frequency of the sub-type within each of the Khirbet ed-Diniyeh occupation levels. The frequencies presented in this table have been accepted because of the homogenous character of the sherd specimens illustrated for each sub-type (following consideration a, above). The level that contains the highest frequencies of sub-types has been considered to be the occupation level most closely contemporary with the occupation at Mari.

**Table 24** simply lists analogous sherd forms among the illustrated corpus and the levels in which they occur at Khirbet ed-Diniyeh (according to consideration b, above). The classification of the sub-types to which these sherds belong is not credible and thus frequency data for these types have not been considered. In the second table, the level with the highest number of single analogies has been considered to be most closely contemporary with the Mari occupation, although conclusions based on this evidence alone are admittedly debatable.
<table>
<thead>
<tr>
<th>Type</th>
<th>Mari Le Palais (Parrot 1959); Temple d’Ishtar (Parrot 1956); Ishtarat and Ninni-zaza; (Parrot 1967); Area A (Lebeau 1983); Area E (Lebeau 1987)</th>
<th>Khirbet ed-Diniyeh sub-type</th>
<th>Level 3D</th>
<th>Level 3C</th>
<th>Level 3B2</th>
<th>Level 3B1</th>
<th>Level 3A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lebeau 1987: pl. V:4-9</td>
<td>5.1 (fig. 69:1-7)</td>
<td>3.17%</td>
<td>99%</td>
<td>.55%</td>
<td>.18%</td>
<td>.21%</td>
</tr>
<tr>
<td>2.</td>
<td>Parrot 1959: fig. 89:926; Lebeau 1987: pl. III:9; Lebeau 1983: fig. 3:5</td>
<td>6.3 (fig. 74:4-8, 75:1-11)</td>
<td>1.76%</td>
<td>1.58%</td>
<td>1.29%</td>
<td>1.27%</td>
<td>1.16%</td>
</tr>
<tr>
<td>3.</td>
<td>Parrot 1956: fig. 110:931; Lebeau 1987: pl. III:4</td>
<td>18.8 (fig. 111:1-11)</td>
<td>1.41%</td>
<td>.99%</td>
<td>.55%</td>
<td>.73%</td>
<td>.53%</td>
</tr>
<tr>
<td>4.</td>
<td>Parrot 1967: fig. 304:3rd from left</td>
<td>19.6 (fig. 116:1-3)</td>
<td>.70%</td>
<td>0%</td>
<td>.55%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>5.</td>
<td>Lebeau 1987: pl. III:1</td>
<td>20.3 (fig. 119:1)</td>
<td>.70%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>6.</td>
<td>Parrot 1956: fig. 110:930; Parrot 1959: fig. 89; bottom of fig.; Lebeau 1983: fig. 2:3; 4:3</td>
<td>18.4 (fig. 109:3-4)</td>
<td>.35%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>7.</td>
<td>Parrot 1956: fig. 109:907</td>
<td>12.1 (figs. 91-94)</td>
<td>4.23%</td>
<td>9.49%</td>
<td>8.13%</td>
<td>2.36%</td>
<td>5.39%</td>
</tr>
<tr>
<td>8.</td>
<td>Parrot 1956: fig. 109:939; 913, 912; Parrot 1959: fig. 88:915; Lebeau 1983: fig. 7:1,3; 8:2, 3,</td>
<td>12.3-12.5 (figs. 95-97)</td>
<td>6.69%</td>
<td>9.29%</td>
<td>9.43%</td>
<td>11.09%</td>
<td>10.67%</td>
</tr>
<tr>
<td>9.</td>
<td>Parrot 1959: fig. 84:857; Lebeau 1987: pl. VI:7</td>
<td>7.1 (fig. 76:1-10)</td>
<td>1.06%</td>
<td>.26%</td>
<td>1.29%</td>
<td>3.09%</td>
<td>1.06%</td>
</tr>
</tbody>
</table>

Table 23: Pottery analogies between Mari and Khirbet ed-Diniyeh, followed by their frequency within the Khirbet ed-Diniyeh occupational sequence.
Table 24: Pottery analogies between Mari and Khirbet ed-Diniyeh within the Khirbet ed-Diniyeh Sequence

The frequencies presented in Table 23 show that among the pottery types present at both Mari and Khirbet ed-Diniyeh, the highest frequencies of analogous specimens appear in the earliest occupation level at Khirbet ed-Diniyeh, Level 3D. The exceptions to this rule are Types 7, 8 and 9, which have higher frequencies in the later levels. Interestingly, Type 9 is characterized by rims belonging to the so-called lentoid flask, a form also present at Tell Ashara/Terqa where it is designated as Type 14. The same lack of a detectable pattern in the rise and fall of the frequencies of this type from level to level is observed here as in the Terqa phases, and further emphasizes its shortcomings as a reliable chronological indicator for specific phases of the Middle Bronze Age.
Type 8 represents the flaring goblet of the same variety that was uncovered at Terqa where it was designated as Type 15. Interestingly, at Khirbet ed-Diniyeh (sub-types 12.2-12.5) one can observe the same kind of marked increase in quantities of this type in the later levels as had been observed at Terqa. Furthermore, as the frequencies of these vessels increase, so does the variety of forms in which they appear. At Khirbet ed-Diniyeh, for example, the height and form of the rims become greatly diversified in the later levels, as does the type of base used (button, low, ring bases). This tendency is also duplicated at Terqa. Examples of the flaring-rim goblet are present in the pre-destruction occupation at Mari, but they do not appear in great quantities, and significantly, they do not exhibit great varieties in form. Almost all of the examples from Mari consist of a short flaring rim and a low, disc base.

Thus, the evidence currently available suggests that the vessels at Mari represent the earliest expression of the vessel before it became popular and diversified in form.

Vessels characterized by Type 7 belong within the same general category as the flaring rimmed goblets of Type 9, except that their bodies are longer and narrower. Like the Type 9 rim goblets, Type 7 frequencies increase in the later levels.

In Table 24, the highest number of analogies between Mari and Khirbet ed-Diniyeh occur in 3D and 3C, the earliest levels of occupation at the site. Perhaps significant is the high occurrence of bands of black bitumen paint on vessels of level 3D (the tradition does persist in later levels, but only on the rims of flared goblets of type 12.1). The same bitumen band decoration was noted at Terqa, where it was restricted to vessels found in phase 5. Presently available evidence suggests that this decorative feature is one of the most sensitive chronological indicators for the period of time represented by the occupation at Mari.
To conclude, ceramic analogies between Mari and Khirbet ed-Diniyeh suggest that level 3D at Khirbet ed-Diniyeh is most closely contemporaneous with the occupation at Mari before its destruction and subsequent abandonment. The ceramic analysis thus supports the information provided by the textual evidence, which equates Khirbet ed-Diniyeh’s level 3D with the time period of Mari’s last ruler, Zimri-Lim (1775-1761 B.C.).

**Baghouz**

Before determining the chronological position of the Baghouz Cemetery in relation to the second-millennium occupation at Mari, the internal chronology of the Baghouz tombs must be assessed.

**Baghouz: Internal Chronology.** According to evidence in the form of the plan of the tombs, the way in which the dead were interred and the types of recovered tomb artifacts, it would appear that the Baghouz cemetery was used for only a brief period of time.

The majority of the Middle Bronze tombs comprise rectangular pits dug into the sides or bases of hillocks. These were lined with stone and roofed over with large stone slabs (du Mesnil du Buisson 1948: 31). Some of the burials were also surrounded with a circle of smaller stones, and covered with an earth tumulus that sealed the tomb construction entirely. This variation in tomb layout was probably related to the wealth or importance of the individuals being buried rather than differences in the time period when the graves were constructed (du Mesnil du Buisson 1948: 31). There was never more than one individual buried within any tomb. In several cases, where the interiors of the tombs
were well preserved, it was observed that the deceased were laid on their sides on low wooden beds (du Mesnil du Buisson 1948: 34), accompanied by wooden footstools and small round tables upon which the funerary meals were placed (du Mesnil du Buisson 1948: 37).

The pottery found within the tombs consists of a homogeneous group of ovoid jars (Forms A and B, du Mesnil du Buisson 1948: pls. LXVIII-LXXII, LXXIII), wide bellied pots (Form E, du Mesnil du Buisson 1948: pls. LXXIV-LXXV), beakers (Form K, du Mesnil du Buisson 1948: pl. LXXVII) and bowls (Forms S, T, U and V, du Mesnil du Buisson 1948: pls. LXXIX-LXXX). Individual vessels within each of these types are remarkably similar in form and size, suggesting that they were manufactured and stored within the tombs during a short time-span.

The presence of fenestrated "duckbill" axes within the Baghouz tombs gives further confirmation that the cemetery was only used for a brief period. These bronze "duckbill" axes are socketed, of semicircular or half-ovoid form, and have two holes (fenestrations) in the blade (Philip 1989: 49). To date, the majority of Near Eastern scholars agree that "duckbill" axes had a very limited time span, occurring only during the first half of the Middle Bronze Age in Syria and Palestine, around the first quarter of the 2nd millennium B.C., before they were widely replaced by narrow-bladed or "chisel" axes (Philip 1989:37-44). The "duckbill" axes occur only in contexts with MBIIA or MBIIA/B transitional pottery but never any later than this (Tubb 1980: 63-64; Dever 1992: 8; G. Philip 1989: 50). In support of the early second-millennium date for the axes are the famous wall paintings from the tombs of Beni Hasan in Egypt, which depict groups of Asiatics carrying
weapons, some of which are "duckbill" axes. The date of the Beni Hasan tombs range between 1971 and 1878 B.C. (Tubb 1980: 63).

"Duckbill" axes were found in eleven of the Baghouz tombs. This quantity suggests that the axes were not rare heirlooms when they were deposited in the tombs. In addition, all of the photographed examples of the axes (du Mesnil du Buisson: pl. LX) show a remarkable uniformity in shape and size (fig. 29), further suggesting that they were manufactured and used within a short period of time.\(^\text{16}\)

Assuming that the tombs in which the axes were found all date to the same time period, then the pots which were found in the same tombs as the axes should also be approximately contemporaneous. Significantly, all of the major Baghouz ceramic types are represented among the "duckbill" tombs. These include du Mesnil du Buisson's types A, B, E, K, N, S, T, and V. Nearly all of the remaining vessel types have been found in other tombs together with pots of the "duckbill" types cited above, strongly suggesting that the other tombs are contemporary with the "duckbill" axe tombs.

Tomb Z203 was clearly the most unusual tomb of the Baghouz cemetery. This particular tomb did not contain a "duckbill" axe, nor vessels that are analogous to the other vessels within the cemetery's corpus. Rather, tomb Z203 was characterized by two lentoid flasks, not unlike the specimens that have been discovered at other sites in the Euphrates valley (du Mesnil du Buisson 1948: pl. LXXVIII; Terqa: Buia 1993: fig. 172:a; Mari: Parrot 1959: fig. 84: 857; Khirbet ed-Diniyeh: Kepinski-Lecomte 1992: Type 7.1). The two flasks were found in conjunction with a distinctive pottery chalice or "incense burner" (du Mesnil du Buisson 1948: pl. LXXVII). Moreover, it is reported that a group of camel
Fig. 29: "Duckbill" axes from tombs Z305 and Z95 of the Baghouz Cemetery (from du Mesnil du Buisson 1948: pl. LX)
bones had been deposited in front of the stone door of the burial chamber (du Mesnil du Buisson 1948: 83)!

While tomb Z203's contents make it difficult to assess its temporal position relative to the remainder of the Baghouz cemetery, the tomb's outer appearance and location do not. Like several of the other tombs, Z203 was roofed over with large stone slabs, encircled by a perimeter of smaller stones, and covered with an earth tumulus (du Mesnil du Buisson 1948: pl. XL). Moreover, the fact that tomb Z203 is located on a small rise of land, less than 3 m from an identically constructed tomb (Z202),\textsuperscript{17} make it highly likely that it should be dated to the same time period as the other tombs of the cemetery (du Mesnil du Buisson 1948: pl. XL).

In summary, the archaeological evidence from Baghouz suggests that the Bronze Age tombs are from the same, fairly short, time period. This is confirmed by similarity in the tomb plans, the homogeneity of the funerary pottery and the presence of fenestrated axes, a form that was used for a limited time in Syria/Palestine.

**Baghouz: Chronological Position Relative to Mari.** Unlike Terqa and Khirbet ed-Diniyeh, there is no textual evidence accompanying the artifacts from the Baghouz tombs. Thus the textual record cannot be used as a independent means of establishing the date of the cemetery. Moreover, unlike the stratified pottery from Terqa and Khirbet ed-Diniyeh, there is no detectable sequence of pottery represented at the tombs of Baghouz. Rather, based on the conclusions above, it would appear that the tombs in the cemetery represent a single, brief period of time and thus all of the material objects found within the tombs are roughly contemporaneous. Because there is no sequence of pottery, it is impossible
to determine the Baghouz tombs' chronological relationship with Mari by matching analogous forms among phase groups according to frequencies, as had been performed with the pottery from Tell Ashara/ Terqa and Khirbet ed-Diniyeh/ Haradum. At Baghouz, there may be numerous vessels belonging to a type that is paralleled at Mari, but that does not exclude the possibility that there were even greater numbers of vessel parallels earlier or later than the period represented by the tombs.

In this light, an attempt to apply the same diagnostic sherd categories that had established Tell Ashara's and Khirbet ed-Diniyeh's chronological position relative to Mari is problematic. Without some data on changes in the frequencies of such categories through time, one cannot correlate the Baghouz tombs with Mari with the same kind of precision.

Further complicating such an attempt is the fact that the diagnostic categories of Tell Ashara and Khirbet ed-Diniyeh are not all present at Baghouz. The differences are probably not related to temporal factors, but are due to geographical distance and the nature of the context from which the Baghouz pottery is derived. Unlike the pottery from Terqa and Khirbet ed-Diniyeh, which is associated with public or domestic architecture, the Baghouz pottery was found in tomb contexts. It is highly unlikely that such tomb material represents the full range of ceramic forms that would have been used by a community of living persons. Evidence from other Near Eastern grave contexts suggests that tomb pottery consists of eating utensils and drinking vessels, perhaps intended for the deceased person's sustenance in the afterlife. It is also possible that tomb vessels contained food that had already been disposed of, poured away as libations or fed to guests
at the funeral. This may explain why one occasionally find stacks of empty pots in graves, as in the Early Dynastic tombs at Abu Salabikh (Postgate 1985: 10). It is less likely to find other types of vessels besides those associated with eating and drinking. Cooking utensils or other types of common household vessels, for example, do not appear to be commonly represented in tomb assemblages. Such a pattern concurs with the evidence from Baghouz, where the majority of the pottery vessels consists of what are probably beer or wine jars, drinking cups, and eating bowls, while cooking vessels are absent.

Despite the limitations of the Baghouz pottery for making comparisons with Khirbet ed-Diniyeh and Tell Ashara, I feel that it is possible, nonetheless, to determine Baghouz’s temporal relationship with the occupation at Mari. This is because of the numerous and striking similarities among the pottery vessels from the two sites. In some cases, the similarities are so impressive that one suspects not only that the vessels are contemporaneous, but that they were the products of the same pottery workshop.

Table 25 lists the parallels between the pottery from Mari and that from the Baghouz tombs.
<table>
<thead>
<tr>
<th>Number</th>
<th>Mari Le Palais (Parrot 1959); Temple d'Ishtar (Parrot 1956); Ishtarat and Ninni-zaza (Parrot 1967); Area A (Lebeau 1983); Area E (Lebeau 1987)</th>
<th>Baghouz (all du Mesnil du Buisson 1948)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Lebeau 1983: fig. 9:1 (with black bitumen paint on upper and lower part of vessel)</td>
<td>pl. LXXXIII: Z74 (with analogous bitumen paint treatment to Mari vessel), Z?</td>
</tr>
<tr>
<td>7.</td>
<td>Lebeau 1983: fig. 5:3</td>
<td>plas. LXIX: Z103, G18, LXXII: Z145</td>
</tr>
<tr>
<td>15.</td>
<td>Lebeau 1983: fig. 4:6</td>
<td>pls. LXXXIX: Z176, LXXX: Z143</td>
</tr>
<tr>
<td>16.</td>
<td>Parrot 1959: fig. 89: 3rd row, left side</td>
<td>pl. LXXXIX: Z12</td>
</tr>
</tbody>
</table>
The table demonstrates that there are many pottery parallels between Baghouz and Mari, and supports the assertion that the two sites co-existed. Although the majority of the parallels are between vessels dating to the final period of occupation at Mari (before its destruction in 1761 B.C.), there is also a small proportion of vessels from Baghouz that compare favourably with the earlier period at Mari, represented by level 3 in Area A (25 out of 84 examples). This suggests that the Baghouz material falls within the earlier part of the sequence established for the Middle Bronze sites within the Mari region.

Further support of the contemporaneity of Baghouz and Mari is provided by some of the data from Tell Ashara/Terqa and Khirbet ed-Diniyeh/Haradum. At both sites, there was an increase in frequency and diversity of flared-rim goblets in occupation levels corresponding to the time period after the destruction of Mari (for Terqa, see discussion of Area C pottery, p.243 above; for Khirbet ed-Diniyeh, see p.251). In contrast, flared-rim goblets at Baghouz are rare, being represented by only three specimens (Du Mesnil du Buisson 1948: pl. LXXIX: Z220, Z211 and Z275). To claim that such a difference is due to the general lack of flared-

<table>
<thead>
<tr>
<th></th>
<th>Table 25: Parallels between the pottery from pre-destruction contexts at Mari and the Middle Bronze Age Tombs at Baghouz</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.</td>
<td>Parrot 1956: fig. 110: 921 (with burnished exterior); Lebeau 1983: fig. 1:5, 4:5; Lebeau 1987: pls. II:8, VI:1 (with burnished exterior)</td>
</tr>
<tr>
<td>18.</td>
<td>Lebeau 1983: figs. 2:3, 4:3; Parrot 1959: fig. 89: 4th row, centre; Parrot 1956: fig. 110: 930</td>
</tr>
<tr>
<td>19.</td>
<td>Parrot 1959: fig. 84: 857</td>
</tr>
</tbody>
</table>

The table demonstrates that there are many pottery parallels between Baghouz and Mari, and supports the assertion that the two sites co-existed. Although the majority of the parallels are between vessels dating to the final period of occupation at Mari (before its destruction in 1761 B.C.), there is also a small proportion of vessels from Baghouz that compare favourably with the earlier period at Mari, represented by level 3 in Area A (25 out of 84 examples). This suggests that the Baghouz material falls within the earlier part of the sequence established for the Middle Bronze sites within the Mari region.

Further support of the contemporaneity of Baghouz and Mari is provided by some of the data from Tell Ashara/Terqa and Khirbet ed-Diniyeh/Haradum. At both sites, there was an increase in frequency and diversity of flared-rim goblets in occupation levels corresponding to the time period after the destruction of Mari (for Terqa, see discussion of Area C pottery, p.243 above; for Khirbet ed-Diniyeh, see p.251). In contrast, flared-rim goblets at Baghouz are rare, being represented by only three specimens (Du Mesnil du Buisson 1948: pl. LXXIX: Z220, Z211 and Z275). To claim that such a difference is due to the general lack of flared-
rim goblets in grave contexts can be disclaimed by their occurrence in the Area A graves from Mari. Furthermore, the Baghouz goblets are identical to the Mari specimens in their size and appearance. Also, in contrast to the variety of flared-rim vessels from the later levels at Tell Ashara and Khirbet ed-Diniyeh, the vessels from Mari and Baghouz are uniform in appearance. In summary, evidence in form of flared-rim goblets, which similarly occur in low frequencies in both the pre-destruction phase at Mari and the Baghouz Cemetery, strongly suggests that the sites are roughly contemporary.

Tell Mohasan

The last site to be fitted into the chronological scheme for the region around Mari is Tell Mohasan, situated to the north of the other sites, near the confluence of the Habur and Euphrates Rivers. Based on the site's similarities to the description in the cuneiform sources of a site called Dur-Yahdunlim (Geyer and Monchambert 1987: 325), it is conceivable that the occupation at Tell Mohasan dates to the reign of Yahdun-Lim (1815-1798 B.C.) and is roughly contemporary with the second-millennium B.C. occupation at Mari.

Unfortunately, any attempt to establish the chronological relationship between Tell Mohasan and Mari on the basis of comparisons between their pottery assemblages is indeterminate, given the paucity of published pottery available for Tell Mohasan. Another problem with the Mohasan pottery is the fact that the sherds were collected on the surface of the site rather from stratified contexts. Consequently, there is no way of knowing whether the sherds represent a single phase in time, or an extended period in which some, but not all of the vessels are contemporary with the pottery at Mari. The third issue concerns the
geographical distance between Tell Mohasan and Mari. We have already encountered problems where sites are physically separated by large distances. There was a decrease in the number of parallel stylistic features among the pots of Tell Hadidi and Tell Bi'a, for example, even though much of the Middle Bronze occupation at these sites is contemporary. Thus the absence of parallels among the pottery assemblages of Tell Mohasan and Mari does not preclude the sites' coexistence.

On a more positive note, pottery data from Tell Ashara/Terqa may be useful in suggesting Tell Mohasan's temporal relationship with Mari, since Terqa's chronological position to Mari has been fairly accurately established. Terqa is closer to Tell Mohasan than Mari, and thus should have more ceramic affinities with it. The pottery from phases 6 and 5 of Terqa's Area F are thought to be contemporary with the pottery from the Middle Bronze occupation at Mari. Thus a high number of parallels between Tell Mohasan and the Terqa pottery types that best distinguish phases 6 and 5 might support Mohasan's synchronism with Mari.

Table 26 lists the parallels between the pottery from Tell Mohasan, and Mari and Terqa, phases 5 and 6.
Table 26: Parallels among the Pottery from Tell Mohasan, Mari and Terqa

Table 26 shows that, of the 15 illustrated vessels from Tell Mohasan, 12 of these, which constitute seven different vessel types, compare favourably with vessels from Mari and Terqa. Particularly convincing are the correlations represented by Numbers 5, 6 and 8, which represent strongly analogous vessel types. One may also note that numbers 5, 7, and 8 represent vessel types that occurred most frequently in phases 5 and 6 at Terqa. These phases are thought best to synchronize with the pre-destruction occupation at Mari.

Parallels were not found with the remaining three vessels illustrated in fig. 12 (Geyer and Monchambert 1987, fig. 12: 13-15 and, contra the authors’ comparison table [tableau 3]). The last pot (fig. 12:15), however, is similar to a “Big Bend” vessel type that occurs in the
early Middle-Bronze Palace occupation at Tell Bi’a (Einwag 1993, Abb. 8:4), a context that, on the basis of the textual evidence, is roughly contemporary with the 18th-century occupation at Mari (see p.206 above). This form does not seem to penetrate any further down the Euphrates River beyond Mohasan. Tell Mohasan’s close proximity to Tell Bi’a and its northerly location within the Mari region may explain the presence of this particular northern vessel type.

In summary, successful comparisons between the published pottery from Tell Mohasan and other sites within the Euphrates Valley (notably Mari and phases 6 and 5 at Terqa), suggest that Tell Mohasan was contemporary with the final occupation at Mari. Nonetheless, while parallels among eight of the ten illustrated specimens from Mohasan are highly encouraging, it is clear that additional data are needed to confirm this proposition, particularly evidence derived from stratified, excavated contexts at Mohasan.

**Mari Region Sites: Chronological Conclusions.**

*Table 27* expresses the relative chronology of the Mari region sites in the Middle Bronze Age, as established through textual and archaeological synchronisms. The absolute dates for the phases have been provided by inscriptions containing year names of rulers whose reigns are well dated, according to the Middle Chronology. Note that the relative position of Tell Mohasan is still tentative, given the nature of the currently available evidence.
<table>
<thead>
<tr>
<th>Date ~ Site 1</th>
<th>1900-1816 B.C.</th>
<th>1815-1761 B.C.</th>
<th>1760-1726 B.C.</th>
<th>1725-1700 B.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baghouz</td>
<td>Cemetery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mari</td>
<td>Area A, level 3</td>
<td>Zimri-Lim Palace, Ishtar Temple area, Area A level 2, Area A tombs 8, 9, 18 and 19, Area E and Ishtar and Ninni- zaza Temple Area, phase 2</td>
<td>Area A, level 1 and Tombs 1 and 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Mohasan</td>
<td></td>
<td>MB Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Ashara/Terqa</td>
<td></td>
<td>Area F, phases 6 and 5</td>
<td>Area F, phase 4</td>
<td>Area F, phase 3 Area C, house STCA</td>
</tr>
<tr>
<td>Khirbet ed- Diniyeh/Harad um</td>
<td></td>
<td>Level 3D</td>
<td></td>
<td>Level 3C</td>
</tr>
</tbody>
</table>

Table 27: Relative Chronology of Early Second Millennium Sites in the Mari Region
V.4 Conclusions: The Relative Ceramic Chronology for Middle Bronze Euphrates Sites

Up to this point, chapter V has established a Middle Bronze Age relative chronology based on the evidence from sites excavated in the “Big Bend” region of the Euphrates Valley, as well as a sequence for the pottery derived from sites within the Mari region. The next and final objective of the chronological study is to correlate the two regional sequences, with the aim of establishing the contemporaneity of settlements across the entire length of the Euphrates River as it flows through Syria.

As already discussed in section V.3, the chosen strategy for making this correlation is to apply the Tell Hadidi diagnostic types to the pottery from all of the contemporary sites/areas/phases within the Mari region combined. It has already been argued that there are enough pottery examples from the combined sites to establish an effective relative date between the Mari region and the Middle Bronze period of the Big Bend region of the Upper Euphrates Valley as represented at Tell Hadidi.

A preliminary observation of the combined ceramic assemblages from the Mari sites indicates that, as at Tell Bi'a, the Middle Bronze pottery of the Mari region is not characterized by the presence of ribbing on a variety of open and closed forms from any particular phase. Although the feature does occur in scattered examples (e.g., ribbed-rim bowl from level 2 of the Ninni-Zaza temple area at Mari, Parrot 1967: fig. 304: 2nd from left), it is not characteristic of this region. Thus, as with Tell Bi'a, Tell Hadidi's original diagnostic categories have been reduced to nine separate categories, omitting the feature of ribbed rims in types C13, C17, C18 and O1. Henceforth, a vessel from the Mari region is considered to parallel vessels belonging to these categories if it comprises the same general rim profile, but
need not have the feature of a ribbed rim. While good correlations with the first nine categories are thought to establish a MBIIA date for the pottery from a specific phase established for the Mari region, additional parallels with rim types C99 (flared-rim goblet), A100 (inwardly projecting rims on medium and large vessels), and A101 (presence of bands of comb-incising on large vessels), should suggest a MBIIA/B transitional date for the pottery. The absence of two or more correlations with the first nine categories of the Tell Hadidi diagnostic types may indicate that the pottery dates either to the MBIIB period or perhaps a later period of time.

Table 28 lists the correlations found between the Hadidi diagnostic categories and pottery from phases/area/sites in the Mari region combined, which have been ordered within a dated sequence according to the ceramic and textual study carried out in section V.3.

The table illustrates that, of the five phases identified for the early second-millennium B.C. in the region of Mari, the phase dating between 1815-1761 B.C., the period spanning the reigns of Shamshi-Adad I of Assyria and Zimri-Lim of Mari, best corresponds to the MBIIA period established for the “Big Bend.” For each of the nine MBIIA diagnostic categories, there is at least one parallel among the Mari phases/areas/sites dating between 1815-1761 B.C., whereas these diagnostic categories are frequently absent from the other phases.

One should note that parallels with diagnostic category C99 were also found among pottery assemblages dating between 1815-1761 B.C., as were parallels with A100. Based on this information, it is conceivable that this time period or at least the end of it, falls within the transitional MBIIA/B phase. My suspicion is that, while some of the phases/sites are purely
<table>
<thead>
<tr>
<th>Diagnostic Rim Types</th>
<th>Mari region sites ca. 1900-1816 B.C.</th>
<th>Mari region sites ca. 1815-1761 B.C.</th>
<th>Mari region sites ca. 1760-1726 B.C.</th>
<th>Mari region sites ca. 1725-1700 B.C.</th>
<th>Mari region sites ca. Post-1700 B.C.</th>
</tr>
</thead>
</table>

Table 28 continued next page
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<tr>
<th>Diagnostic Rim Types</th>
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<th>Mari region sites ca. 1760-1726 B.C.</th>
<th>Mari region sites ca. 1725-1700 B.C.</th>
<th>Mari region sites ca. Post-1700 B.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12</td>
<td>Mari: Lebeau 1983, fig. 5:6 (level 3, Area A)</td>
<td>Terqa: Buia 1993, fig. 133:a-b (phase 5, Area F)</td>
<td>—</td>
<td>Terqa: Buia 1993, fig. 66:b (phase 3, Area F)</td>
<td>—</td>
</tr>
<tr>
<td>C13 with/without ribbing</td>
<td>—</td>
<td>Mari: Parrot 1959, fig. 87:M.897 (Palace); Parrot 1967, fig. 304, 7th-8th from left (Ninni-Zaza Temple Area)</td>
<td>Terqa: Buia 1993, figs. 116:d-e (phase 5, Area F); 159:g (phase 6, Area F)</td>
<td>Khirbet ed-Diniyeh: Kepinski-Lecomte 1992, fig. 78:1-3 (level 3D)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Baghouz: du Mesnil du Buisson 1948, pl. LXXIII:Z147, Z74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C17 with/without ribbing</td>
<td>—</td>
<td>Mari: Lebeau 1983, fig. 3:11 (level 2, Area A); Lebeau 1987, pl. III:10 (Area E)</td>
<td>Terqa: Buia 1993, figs. 126:a, 132:g (phase 5, Area F); 170:g (phase 6, Area F)</td>
<td>Tell Mohasan: Geyer and Monchambert 1987, fig. 12:15</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 28 continued next page
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<thead>
<tr>
<th>Diagnostic Rim Types</th>
<th>Mari region sites ca. 1900-1816 B.C.</th>
<th>Mari region sites ca. 1815-1761 B.C.</th>
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<th>Mari region sites ca. Post-1700 B.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C18 with/without ribbing</strong></td>
<td>Mari: Lebeau 1983, fig. 4:10 (level 3, Area A)</td>
<td>Mari: Lebeau 1983, fig. 2:6 (level 2, Area A); Parrot 1967, fig. 304: 2nd from left (Ninna-Zaza Temple Area)</td>
<td>Terqa: Buia 1993, fig. 77:c (phase 4, Area F)</td>
<td>---</td>
<td>Khirbet ed-Diniyeh: Kepinski-Lecomte 1992, figs. 59:2-3, 60:1-3 (level 3C)</td>
</tr>
<tr>
<td><strong>O1 with/without ribbing</strong></td>
<td>---</td>
<td>---</td>
<td>Terqa: Buia 1993, fig. 46:c (phase 3, Area F)</td>
<td>Terqa: Buia 1993, fig. 7:1 (tomb 1, Area A)</td>
<td>Khirbet ed-Diniyeh: Kepinski-Lecomte 1992, fig. 95:5-12 (level 3B1)</td>
</tr>
<tr>
<td><strong>MBIIB-1 C99</strong></td>
<td>---</td>
<td>---</td>
<td>Terqa: Buia 1993, fig. 34 (phase 3, Area F); Kelly-Buccellati and Shelby 1977, fig. 19: TPR 4 42 and 4 44; fig. 20: TPR 4 44j, 4 45 and 4 46; fig. 21: TPR 4 47 (Area C)</td>
<td>Khirbet ed-Diniyeh: Kepinski-Lecomte 1992, figs. 96:1-2, 97:2-7 (level 3C)</td>
<td>---</td>
</tr>
</tbody>
</table>

Table 28 continued next page
<table>
<thead>
<tr>
<th>Diagnostic Rim Types</th>
<th>Mari region sites ca. 1900-1816 B.C.</th>
<th>Mari region sites ca. 1815-1761 B.C.</th>
<th>Mari region sites ca. 1760-1726 B.C.</th>
<th>Mari region sites ca. 1725-1700 B.C.</th>
<th>Mari region sites ca. Post-1700 B.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A100</td>
<td>—</td>
<td>Mari: Parrot 1967, fig. 304: 2nd from right</td>
<td>Mari: Lebeau 1983, fig. 1:13 (level 1, Area A)</td>
<td>Terqa: Buia 1993, fig. 58:1 (phase 3, Area F)</td>
<td>Khirbet ed-Diniyeh: Kepinski-Lecomte 1992, fig. 68:6-9 (level 3A)</td>
</tr>
<tr>
<td>A101</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 28: Presence/Absence of Tell Hadidi’s Diagnostic Categories Among the Sequence of Phases/Areas/Sites of the Mari Region
MBIIA in date, such as the Baghouz Cemetery and phase 6 of Area F at Terqa, others are dated close to or within the MBIIA/B transitional phase. Pottery dated to the time of Zimri-Lim, derived from contexts at Mari, as well as level 3D at Khirbet ed-Diniyeh and phase 5 of Area F at Terqa may be phases or sites that mark this transitional period, since they tend to include more frequent examples of type C99 than the other contexts.

To summarize, correlations among pottery types throughout the Euphrates region of Syria suggest that the MBIIA period, as identified in the Big Bend area, is approximately contemporary with the period dated 1815-1761 B.C. in the Mari region. The presence of diagnostic categories C99 and A100 at several of these sites suggests that the MBIIA/B Transitional period is also represented within this time period. In light of these data, I propose that the period may be divided as follows, acknowledging that the scheme is only provisional until further corroborating evidence can be added:

1900-1776 B.C.: MBIIA (Cooper)
1775-1750 B.C.: MBIIA/B Transitional (Cooper)
1749-1600 B.C.: MBIIIB (Cooper)

Table 29 gives a final presentation of the devised sequence of occupation in the Syrian Euphrates Valley, showing the dates of sites from both the “Big Bend” and the Mari region, both in terms of their position relative to one another within the phasing of the Middle Bronze Age and in absolute years.
<table>
<thead>
<tr>
<th>Middle Bronze Phase and Date—Site</th>
<th>MBI (EB/MB Transitional) (2000-1900 B.C.)</th>
<th>MBIIA (1900-1776 B.C.)</th>
<th>MBIIA/MBIIIB Transitional (1775-1750 B.C.)</th>
<th>MBIIIB (1750-1600 B.C.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell Hadidi</td>
<td>Area B (Dornemann 1992: fig. 20)</td>
<td>Area A</td>
<td>Area B (Dornemann 1979: figs. 20-23)</td>
<td></td>
</tr>
<tr>
<td>Tell Mumbaqat/‘Munbaqa’</td>
<td>'Mudbrick House' House AD</td>
<td>Steinbau 1, phase H5/H6</td>
<td>Steinbau 1, phase H4.1/H5 Quadrants 1733 and 4931</td>
<td></td>
</tr>
<tr>
<td>Baghouz</td>
<td></td>
<td>MB Cemetery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Mohasan</td>
<td></td>
<td>MB Occupation(?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Habuba Kabira</td>
<td></td>
<td>Levels 17-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mari</td>
<td>Area A, level 3</td>
<td>Area A, level 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tombs 1 and 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zimri-Lim Palace</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ishtar Temple</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area A, level 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temples of Ishtarat and Ninni-Zaza</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Halawa</td>
<td></td>
<td>Level 2b-c</td>
<td></td>
<td>Level 1</td>
</tr>
<tr>
<td>Tell Bi’a</td>
<td>“Post-Phase” of Palace</td>
<td>Hill E North, levels IV-I</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hill C Temple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hill C Graves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hill E North, level Vb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Ashara/Terqa</td>
<td>Area F, phases 6 and 5</td>
<td></td>
<td>Area F, phases 4-3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Area C, houseSTCA</td>
<td></td>
</tr>
<tr>
<td>Khirbet ed-Diniyeh/Haradum</td>
<td></td>
<td>Level 3D</td>
<td>Levels 3C, 3B2, 3B1, and 3A</td>
<td></td>
</tr>
<tr>
<td>el-Qitar</td>
<td></td>
<td></td>
<td>Area Y, F/H</td>
<td></td>
</tr>
<tr>
<td>Tell es-Sweyhat</td>
<td></td>
<td></td>
<td>Area V (Holland 1977: figs. 1:1, 2:1-2; 1976: figs. 8:2, 11:6)</td>
<td></td>
</tr>
</tbody>
</table>

Table 29: Chronological Table, showing the Sequence of Occupation in the Syrian Euphrates Valley during the Middle Bronze Age
CHAPTER V ENDNOTES

1. The three sherds from the Holland's 1977b report are said to come from Area V, the step trench that was dug on the northern slope. No further details of this particular operation are provided (see Holland 1976: 62). The other two vessels are from Area IX, which is said to comprise good phases of early 2nd millennium occupation. Again, no further details about this excavation area are given (see Holland 1976: 62-63).

2. This is based on Strommenger's comment that the pottery (of Abb. 18) dates to the time of the latest building, which in the 1969 campaign corresponds to the latest walls of the rectangular structure in quadrant R 11; see Heinrich et al. 1969: 43 for description.

3. See Fugmann 1958: 114, and his treatment of the Hama H material. Most of the pottery parallels to Hama are from Ugarit, Qatna and Byblos, none of whose dates have yet been confirmed, owing to problems with stratigraphy or lack of objects with absolute dates.

4. See Strommenger et al. 1989: 15. The exact location of the clay stoppers is not given: "An einer anderen Stelle lag ein Haufen einfacher,..."

5. Vessels with vertical, ribbed rims (Strommenger et al. 1982: top row of Abb. 14), are also represented in the Palace (Einwag 1993: Abb. 6: 19 and 23). At Tell Hadidi, this vessel type (C10) was particularly frequent in the early part of MBIIA (Dornemann 1992: fig. 17: 16-18, fig. 18:1-3). The Bi'a temple pottery also features an example of a narrow-necked, closed jar (Strommenger et al. 1982: Abb. 14: second row, first on the left), such as is illustrated in the Palace pottery (Einwag 1993: Abb. 7: 1-3), and varieties of cups of type O1 (Strommenger et al. 1982: Abb. 14: second row, middle four examples, similar to Einwag 1993: Abb. 6: 21-22, 27-30).

6. The globular, closed vessel from Grave 39/23:2, illustrated in Strommenger et al. 1984: Abb. 21: d corresponds very favourably with the vessel from the Palace illustrated in Einwag 1993: Abb. 8:2. Similarly, the cup forms (Type O1) from Grave 39/24:1 (Strommenger et al. 1984: Abb. 21: f-g), are also found in the Palace (Einwag 1993: Abb. 6:21-22).

7. Some effort was made to find and study the Mari material that was turned over to the Aleppo Museum, according to the museum numbers published in Parrot's monographs. Although we expected to find over 100 complete pots, only a dozen or so vessels could be accounted for. These vessels bear different museum numbers than those assigned in Parrot's time, reflecting a re-cataloguing of artifacts. The remaining vessels, which are supposed to be housed in Aleppo, could not be found.

8. The following table lists the pottery parallels between the two areas:

<table>
<thead>
<tr>
<th>Number</th>
<th>Temple d'Ishtar (all Parrot 1956)</th>
<th>Le Palais (all Parrot 1959)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>fig. 108 no. 904</td>
<td>fig. 87 no. 885</td>
</tr>
</tbody>
</table>
Particularly striking are the similarities between the small, long-necked jars of Number 2, the flanged-rim jars of Number 3, and rim goblets of Number 4, which are all characterized by low disc bases and short flaring rims. The pottery parallels support the argument that the latest occupation in the Temple area is contemporary with the Palace occupation.

9. The following table lists the parallels between the published pottery from Area E and the Palace and the area of the Ishtar Temple:

<table>
<thead>
<tr>
<th>Number</th>
<th>Area E (all Lebeau 1987)</th>
<th>Le Palais (Parrot 1959) and Le Temple d'Ishtar (Parrot 1956)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>pl. II: 9-10</td>
<td>Parrot 1956: fig. 110:931</td>
</tr>
<tr>
<td>2.</td>
<td>pl. III: 9</td>
<td>Parrot 1959: fig. 89:926</td>
</tr>
<tr>
<td>3.</td>
<td>pl. IV: 5-16</td>
<td>Parrot 1956: fig. 108:911 and 946, Parrot 1959: fig. 87:895 and 886</td>
</tr>
<tr>
<td>4.</td>
<td>pl. V: 10</td>
<td>Parrot 1956: fig. 108:901</td>
</tr>
<tr>
<td>5.</td>
<td>pl. VI: 1</td>
<td>Parrot 1956: fig. 110:921</td>
</tr>
<tr>
<td>6.</td>
<td>pl. VI: 7</td>
<td>Parrot 1959: fig. 84:857</td>
</tr>
<tr>
<td>7.</td>
<td>pl. VI: 9-12</td>
<td>Parrot 1956: fig. 109:939, 913 and 912; Parrot 1959: fig. 88:915</td>
</tr>
<tr>
<td>8.</td>
<td>pl. VI: 16</td>
<td>Parrot 1956: fig. 108:911</td>
</tr>
</tbody>
</table>

Significant among the parallels are the bowls of Number 5, characterized by flat-topped rims. Both of the bowls were covered with slip, which was applied in vertical strokes up the sides of the walls. The bowls were then hastily burnished. This unique surface decoration is rare, although it does also appear on a bowl found in one of the MBIIA tombs at Baghouz.

It seems reasonably certain that the bases illustrated in plate VI: 9-12 (Lebeau 1987) are from vessels analogous to the flared-rim goblets found in the Ishtar Temple and the Palace (Number 7 above). This is because the small, disc bases are not associated with any other vessel type known from Mari except for narrow-necked juglets, (i.e. Lebeau 1983: fig. 3:4), which are distinguished from the flared-rim goblets by the vertical stance of their lower walls.
10. Two of the tablets, for example, date to the year in which Zimri-Lim ascended “the throne of his father”; 3 tablets to “Ah purattim”, which is thought to represent Zimri-Lim year 1; 15 tablets to the year of “Annunitum of Šehrum”, Zimri-Lim year 2; and several others to the year of “Kahat,” year 3 of Zimri-Lim. See Charpin 1985: 454.

11. They are inscribed with two eponyms: Riš-Šamaš and Ibni-Adad. One of the eponym lists published by M. Birot demonstrates that Ibni-Adad was succeeded immediately by Riš-Šamaš, and that they date within the last 10 years of the Assyrian inter-regnum at Mari.

12. The following table lists the parallels between the pottery from Area A, level 2 and other Middle Bronze contexts at Mari:

<table>
<thead>
<tr>
<th>Number</th>
<th>Area A, level 2 (all Lebeau 1983)</th>
<th>Le Palais (Parrot 1959), Le Temple d’Ishtar (Parrot 1956) and Area E (Lebeau 1987)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>fig. 2 no. 3</td>
<td>Parrot 1959: fig. 89 bottom of fig.</td>
</tr>
<tr>
<td>2.</td>
<td>fig. 2 no. 5</td>
<td>Lebeau 1987: pl. 1 no. 6</td>
</tr>
<tr>
<td>3.</td>
<td>fig. 2 no. 6</td>
<td>Parrot 1956: fig. 110 no. 931; Lebeau 1987: pl. II nos. 9-10</td>
</tr>
<tr>
<td>4.</td>
<td>fig. 2 no. 8</td>
<td>Parrot 1959: fig. 89 no. 924</td>
</tr>
<tr>
<td>5.</td>
<td>fig. 3 no. 3</td>
<td>Parrot 1959: fig. 87 no. 895; Lebeau 1987: pl. IV nos. 8-16</td>
</tr>
<tr>
<td>6.</td>
<td>fig. 3 no. 4</td>
<td>Parrot 1959: fig. 88 no. 874</td>
</tr>
<tr>
<td>7.</td>
<td>fig. 3 no. 5</td>
<td>Parrot 1959: fig. 89 no. 926; Lebeau 1987: pl. III no. 9</td>
</tr>
<tr>
<td>8.</td>
<td>fig. 3 no. 6</td>
<td>Lebeau 1987: pl. III no. 7</td>
</tr>
<tr>
<td>9.</td>
<td>fig. 3 no. 11</td>
<td>Lebeau 1987: pl. III no 10</td>
</tr>
</tbody>
</table>

13. Compare the pottery from level 3 with pottery from Area B at Mari, whose latest level contains pottery thought to date to the end of the Early Bronze Age (Lebeau 1985: pl. I). Parallels exist among one of the bowl forms (Area A’s fig. 4:2 and Area B’s pl. I:3) and one of the pots (Area A’s fig. 5:5 and Area B’s pl. I:14), but generally Area A has quite different vessel types (i.e. bowls with flat rims [fig. 4: 5 and 10] and carinations [fig. 4:8 and 10], as well as jars with flanged rims [fig. 5:3 and 8], never occur in the Early Bronze Age). The thickened rim profile illustrated in fig. 5: 11 (Lebeau 1983) does resemble hole-mouthed cooking pots from EBIV assemblages elsewhere in the Euphrates region of Syria (Hadidi: Dornemann 1979: fig. 19:1; Tell Bi‘a: Stommenger et al. 1987: Abb. 15:6; Einwag 1993: fig. 10: 20-26). However, its persistence in later contexts elsewhere suggests that it is not out of place in the Middle Bronze Age. The same thing can be said for the multiple-ribbed rim of fig. 5:10 (Lebeau 1983).
14. The following table lists the analogies between the IshtarîNnni-zaza area and other Middle Bronze contexts at Mari:

<table>
<thead>
<tr>
<th>Number</th>
<th>IshtarîNnni-zaza (all Parrot 1967)</th>
<th>Le Palace (Parrot 1959), Le Temple d’Ishtar (Parrot 1956), Area E (Lebeau 1987) and Area A (Lebeau 1983)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>fig. 304: 4th from left</td>
<td>Lebeau 1987: pl. III no. 9; Lebeau 1983: fig. 3 no.5</td>
</tr>
<tr>
<td>2.</td>
<td>fig. 304: 6th from left</td>
<td>Lebeau 1987: pl. III no. 8; Lebeau 1983: fig. 3 no.6</td>
</tr>
</tbody>
</table>

One may note in addition that the pottery from the area of the IshtarîNnni-zaza Temples compares favourably with vessels from the “Big Bend” region, namely the bowl with the ribbed rim (Parrot 1967: 2nd from left), which is analogous to Tell Hadidi’s early Middle Bronze vessel type O1, and the pots with out-turned rims and collars (Parrot 1967: 7th and 8th from left), which are analogous to Tell Hadidi’s vessel type C14.

15. Buia (1993) does not give any more details about the content of the tablets from phases 5 and 6, nor is there any published information elsewhere. We can only assume that the month or year names reported in her dissertation establish correct dates for the tablets.

16. Tombs with “duckbill” axes (all du Mesnil du Buisson 1948): Z123 (pl. LX), Z143 (pl. LX), Z102 (pl. LX), Z305 (pl. LX), Z95 (pl. LX), Z67 (pl. XLII drawing), Z121 (pl. XLV drawing), Z122 (pl. LI, letter E is said to be an axe, although the grave drawing does not picture it; but see reconstruction on pl. LVII!), Z141 (pl. LVII drawing), Z103bis (no drawing, only record in catalogue, p. 73), Z309 (no drawing, only record in catalogue, p. 92).

17. Tomb Z202 contained an ovoid jar of type F (du Mesnil du Buisson 1948: pl. LXXV). Incidentally, this jar bears a black, painted potter’s mark that compares very favourably with a painted mark on a vessel from another tomb (Z192, jar type E; for potter’s marks, see du Mesnil du Buisson 1948: plis. LXXXI-LXXXIV). These potter’s marks are suggestive of a simple, written form of communication. Possibly the symbols identify the owner of the vessels or the type of material that was stored within the vessels.
CHAPTER VI
CORRELATIONS BETWEEN THE EUPHRATES SEQUENCE AND THE MIDDLE BRONZE AGE OF WESTERN SYRIA AND PALESTINE

VI.1 Introduction

Having established a Middle Bronze Age sequence for the Euphrates Valley of Syria, it is now possible to discuss that region's temporal position in relation to other chronologies in the ancient Near East. Certainly, the Middle Bronze of the Euphrates Valley is well understood within the chronological context of southern Mesopotamia. Historical sources, principally from Mari, inform us that Zimri-Lim's reign at Mari (1775-1761 B.C.) co-incident with the reigns of Rim-Sin of Larsa (1822-1763 B.C.) and Ibal-pi-el of Eshnunna (1790-1761 B.C.). Moreover Mari's defeat by Hammurapi in the 32nd year after his accession is a well known historical event that makes very clear the temporal connection between Mari and the Babylonian kingdom of the south.

Equally important, although considerably harder to determine, is the Euphrates Valley's temporal connection with the Levant, the region consisting of Palestine and the Mediterranean coastal regions of Syria and Lebanon. Internally, the Middle Bronze Levantine chronology has been reasonably well established, owing to considerable efforts over the past 60 years to study the sequential record of artifactual assemblages and architecture from excavated sites with well stratified contexts, and determining their relative placement within a broader regional chronological scheme. Early efforts were built upon W.F. Albright's ceramic chronology, based on his excavations at Tell Beit Mirsim (Albright 1932), and Kathleen Kenyon's scheme, based on her division of Jericho tombs into successive
chronological groupings (Kenyon 1960b, 1965). Stratified evidence, primarily from occupational and tomb contexts at Shechem, Gezer, Megiddo and Aphek (Wright 1961; Dever 1974, 1976; Seger 1975; Cole 1984), allowed further refinements to the Levantine chronology. At present, the Middle Bronze sequence for all of the Levant is regarded as having three phases, known as MBIIA, MBIIB, and MBIIIC (or MBI, MBII and MBIII, following the terminology of Gerstenblith [1983:3], recently Dever [1992] and others), which are distinguished chiefly on the basis of changes in metalwork, ceramic style and ceramic technology (Mazar 1990: 182-85, 214-19).

While this internal chronology has been successfully established for the Middle Bronze of the Levant, the Levant’s placement in time relative to the neighbouring chronologies of Mesopotamia and Egypt has been difficult to determine. This is chiefly due to the paucity of textual sources that clarify the historical connections between the regions. Moreover, the establishment of synchronisms based on artifact parallels has often been the source of controversy, owing to the questionable nature of the evidence that has been used to make the temporal synchronism and the context from which it has been derived. For example, artifacts such as Egyptian scarabs or Mesopotamian cylinder seals found within Levantine contexts have been used frequently to establish temporal synchronisms with the other regions (eg. Bietak 1984). However, many dispute the reliability of these objects as dating criteria, since the artistic styles upon which they are being characterized are dependent on subjective typological criteria (Dever 1991: 75). Moreover, even when such objects have been inscribed with known historical names, as is often the case with Egyptian scarabs, the context in which they are found is frequently suspect. The other problem is that these objects may be heirlooms
and thus provide only a *terminus post quem* for the context in which they were found.

The long-disputed matter of Egyptian and Mesopotamian absolute dates has generated further complications regarding synchronisms with the Levant. While Egyptologists fortunately seem in agreement with Kitchen’s recent “high” chronology for the second millennium B.C. in Egypt (Kitchen 1987), there is still a rigorous debate among Assyriologists about which of the Mesopotamian “high,” “middle” or “low” chronologies, based on the astronomical reckonings provided by the so-called Venus Tablets, should be accepted. As Dever has noted, in the confusion over these dates, the attempt to move from a relative to an absolute chronology has often resulted in a classic circular argument, in which appeal is made to one unspecified variable to explain another (Dever 1992: 1).

It is not my intention to review all of the arguments concerning synchronisms between the Levant and elsewhere in the Near East, nor try to resolve the ongoing dispute regarding “high”, “middle” and “low” chronologies, which requires an intensive survey of all artifactual and textual evidence from the Near East and is well beyond the scope of the present study. Rather, since my task is to understand the temporal position of the Levantine sequence in relation to the Euphrates Valley during the Middle Bronze Age, only those efforts to establish a synchronism between those two regions will be reviewed and discussed. Moreover, since the emphasis is an understanding of the *relative* chronological relationship between the two regions, conclusions about which absolute dates to accept will not be resolved at this time.

The following study begins with a review of the principal attempts made to establish a synchronism between the Levant and Mesopotamia (namely the Euphrates Valley). After each of these efforts is described, I try to explain why they are problematic and cannot
convincingly establish an effective temporal correlation between the two regions. The discussion follows with an alternative scheme, which proposes a new synchronism based on a reconsideration of the Levantine sequence in conjunction with the Euphrates chronological sequence that was established in chapter V of this study.

VI.2 Proposed Correlations between Mesopotamia and the Levant

Albright and the Byblos Connection. W.F. Albright can be credited with one of the best-known attempts to synchronize the Mesopotamian sequence with the Middle Bronze Age of the Levant (Albright 1964, 1965, 1966). In examining the archaeological evidence that Pierre Montet recovered from the Royal Tombs at Byblos, he argued for the chronological significance of an alabaster object from Tomb IV, which had been inscribed with the designation, "tm." Albright cleverly equated this name with an individual named Yantin-'Ammu, a well-known Byblite prince who is reported in a Mari text to have been a contemporary of Zimri-Lim of Mari (Albright 1964: 41, Dossin 1939: 111). Moreover, a certain "Yantin" or "Entin" was also known from other Byblite inscriptions to be a contemporary of Neferhotep I of Egypt (Albright 1964: 43). Because Albright considered the accompanying pottery of Tomb IV at Byblos to compare well with MBIIA pottery from Palestine (Albright 1964:43; 1965:39 and 1966:27), this justified the synchronism between Zimri-Lim and the MBIIA period of the Levant. Along with Albright's argument was his insistence on using the Mesopotamian "low" chronology, which dates Zimri-Lim's reign to 1714-1696 B.C.. Thus, according to Albright, the Byblos tombs as well as the MBIIA period of Palestine date as late as the end of the 18th century B.C. (Albright 1964: 43; 1965:39 and
Albright’s argument should be treated with skepticism. First of all there is his reconstruction of the name Yantin-’Ammu from the fragmentary inscription with “tn”. Many have considered this argument to be linguistically weak (Kitchen 1967; Dever 1992: 5). Second, a more in-depth investigation of the pottery from Tomb IV and the other supposedly contemporary Byblos tombs finds that the pottery assemblages are not clearly dateable to the MBIIA at all. Olga Tufnell, in her publication of the material from the tombs argues that the pottery was probably mixed by the excavators and may well span the MBI and II, and in any case is not ‘typical’ of Palestinian MBI (MBIIA) pottery at all (Tufnell 1969: 5-33). For example, the squat dipper juglets can easily be mistaken for MBIIIC/LBI juglets in appearance, as can the storejars, while the single cooking pot is almost a classic MBIIC type (Dever 1976: 27 n. 69). A review of the evidence from Byblos suggests, therefore, that Tomb IV can not be securely dated to the MBIIA. Thus, even if a positive identification with Yantin-’Ammu could be made, the remaining tomb evidence cannot provide a reliable means with which to establish a synchronism between the MBIIA and the Mari period. Given this fact, Albright’s synchronism based on the Byblos evidence should probably be rejected.

Yadin’s Hazor/Mari Archive Synchronism Many have considered Yigael Yadin’s conclusions based on his work at Hazor and the mention of that site in cuneiform sources from the Archives of Mari to be one of the more successful attempts at finding a synchronism between the Middle Bronze Age of Palestine and Mesopotamia, specifically Mari.

The city of Hazor is mentioned several times in cuneiform documents from the Archives of Mari, dating to the reign of the Old Assyrian king, Shamshi-Adad and his
successor, Zimri-Lim. In these documents, most of which are letters of correspondence, Hazor is mentioned in connection with trading operations and diplomatic relations with the city of Mari. One of the letters, for example, lists a fairly large consignment of tin that was sent from the court of Mari to Hazor (Malamat 1971: 31-38). Another letter reports that the king of Hazor had given a gift of a gold ring and silver vases to the Mari king during his visit to the Syrian city of Ugarit (Malamat 1989: 95-96). Several other letters give the details of gifts sent from Hazor to Mari, as well as the movements of Hazorite diplomatic envoys and the presence of Hazorite messengers at the court of Mari (ARMT 6:23 and 78; ARMT 7:236; ARMT 13:747; ARMT 23:243, 541, and 505; ARMT 25:103 and 119. See also Malamat 1983: 169-74).

This information about Hazor during the period of the Mari Archives, that it was ruled by a king, and that it had the administrative power and economic prosperity to send expensive gifts and diplomatic envoys to the Mari court, suggests that Hazor was an important city during this time. Consequently, many argue that the Middle Bronze monumental buildings at Hazor, namely the palace, temples and the expansive lower city with its massive earthen rampart, should date to this period. Yigael Yadin, the director of the excavations at Hazor, found that these monumental buildings and the foundation of the lower city and rampart were associated with pottery that could be dated to the Middle Bronze IIB period of the Levant (Yadin 1972: 107). Yadin’s findings therefore resulted in the conclusion that the period of the Mari Archives was contemporary with the MBIIB period of Palestine.

Yadin’s conclusions have remained virtually unchallenged. Gerstenblith, for example, reported her general acceptance of the synchronism between the Mari Archive and the
Levantine MBIIB period in her published dissertation (Gerstenblith 1983: 102). Malamat, who has worked extensively with the Mari tablets, supports this same conclusion (Malamat 1992: 122). Dever uses an MBIIB/Mari Archive synchronism in his attempt to resolve the problem of whether to assign a high, middle or low absolute dating to the Middle Bronze period of the Levant. He uses absolute dates from Egypt in order to establish the transitional date between MBIIA and IIB, and consequently rejects the Mesopotamian “middle” chronology since it wrongly places the reign of Shamshi-Adad in the MBIIA. Since Shamshi-Adad should coincide with the MBIIB period according to the Hazor/Mari Archive synchronism as concluded by Yadin, then, according to Dever, it is necessary to accept the “low” chronology, which would fix Shamshi-Adad’s reign to a later date and comfortably within the MBIIB period (Dever 1992: 10). Finally, Mazar’s recent survey of the archaeology of Israel accepts a Hazor MBIIB/Mari Archive synchronism, although he suggests that the correlation may be as early as the transition between MBIIA and MBIIB since, in his opinion, the pottery from the earliest foundations at Hazor is in fact “transitional MBIIA-MBIIB” (Mazar 1990: 194).

Like Albright’s proposed synchronism discussed above, there are problems with the Hazor MBIIB/Mari Archive synchronism. Even Gerstenblith points out that Yadin excavated only a relatively small area of the mound at Hazor, and the extensive MBIIB building projects may have eradicated architectural remains of the MBIIA period (Gerstenblith 1983: 107 n. 5). In agreement with this is the evidence that Kempinski and Dunayevsky gathered from a small sounding in the Eastern Rampart at Hazor. Here the excavators actually did find an abundance of MBIIA pottery and concluded that at least part of the lower city was founded
and fortified already in this earlier phase (Kempinski and Dunayevsky 1990: 13 [English summary]). That Hazor was already a substantial settlement in the MBIIA period would accord well with evidence from other sites in Israel, such as Tell Aphek, Tell Poleg and Tell Zeror, where archaeologists have found fortified and well-developed MBIIA settlements (Kochavi, Beck and Gophna 1979: 122-65). Given this information, it is possible that Hazor and other settlements in Palestine were already capable of engaging in long-distance trade with Mari and other Near Eastern cities in this earlier, MBIIA period.

The MBIIA of the Levant and Chagar Bazar. Another attempt at finding a synchronism between Mesopotamia and Palestine involves the archaeological and textual evidence from the Syrian site of Chagar Bazar, and its relation to the Levantine Middle Bronze Age ceramic sequence. Chagar Bazar, a site situated in the Habur region of northeastern Syria, was excavated by Max Mallowan in the 1930s. The site has a long history, with occupation occurring from the forth to the early part of the second millennium B.C. For a short time, it served as the type site for understanding northern Mesopotamian material cultural developments.

Some of the first evidence for the painted pottery known as Habur Ware was found in the uppermost level of occupation at Chagar Bazar (level 1). Along with this pottery, Mallowan uncovered several second-millennium B.C. cuneiform tablets. Some of the tablets are firmly dated to the period of the governor Yasmah-Adad, who administered this region under his father, Shamshi-Adad, king of Assyria. The tablets were found on the floor of a room that was reported to be associated with the earliest occurrence of Habur Ware (Mallowan 1947: 82). This evidence demonstrates the existence of Habur Ware during the
reign of Shamshi-Adad.

The Levantine synchronism depends on the fact that, at the beginning of the Middle Bronze Age in Palestine, a very similar painted ware appears. This culture (sometimes called Levantine Painted Ware) is thought to be directly related to the Habur Ware culture and is considered to be contemporary with it. Thus, if the Palestinian painted ware first appears in MBIIA, then the first appearance of Habur Ware at Chagar Bazar, as well as the associated Shamshi-Adad tablets, must also date to the MBIIA period.

There are, however, significant problems with this argument. First, the incompleteness of the Chagar Bazar reports makes it impossible to confirm that painted Habur Ware did actually derive from the same floor as the tablets that are dated to Shamshi-Adad (Mallowan 1947: 82). The floor, which is reported to have been found in Room 106 of a large house in Area T.D., was discovered in the third season of excavations (Mallowan 1947: 81-82). Unfortunately, the only illustrated Habur Ware examples come from contexts that lay stratigraphically above the phase in which the tablets and the early floor of room 106 were found (Mallowan 1947: 84 and pls. LXXXI-II). Only three unpainted vessels associated with the tablets are illustrated and none of these can be classified as Habur Ware (Mallowan 1947: pl. LXXXI:1; LXXXII: 13 and 16). Thus even though we are told that there is a clear synchronism between Habur Ware and Shamshi-Adad, that evidence is never illustrated.

Despite this problem with the publication, many Palestinian archaeologists have accepted the proposed correlation between Shamshi-Adad and Habur Ware. This has been considered troublesome, however, since it suggests that Habur Ware and the Mari period coincide with the Levantine MBIIA period, while many archaeologists strongly favour a
MBIIB/Mari Archive synchronism. As a way of resolving the issue, they have re-examined the Chagar Bazar site reports and suggest that there is an even earlier occurrence of Habur Ware at the site that pre-dates the reign of Shamshi-Adad and co-incides with their MBIIA period (Dever 1976: 32-33 n. 94; Gerstenblith 1983: 62 and 105). In their search, they have focused on the stratigraphy of Area M, dug in the first season (Mallowan 1936: 14, and fig. 2), and Areas AB/BD dug in the second season (Mallowan 1937: 114-15, 119), where tombs containing Habur Ware that were supposedly cut from the floors with Shamshi-Adad tablets, may actually have existed before the construction of these floors and thus pre-date them (Dever 1976: 14 and 36 n. 109; Gerstenblith 1983: 62: “it seems unlikely that tombs would be tunnelled in under existing wall foundations, thus weakening the structure, so that we may suggest that these tombs should predate the earliest structures of Level I and thus also Iasmah-Adad [Shamshi-Adad]”).

A review of the articles that report these tombs, however, finds that none of these tombs has any relation to tablets that date explicitly to the period of Shamshi-Adad. For one, the excavators uncovered no tablets whatsoever during the first season, and in the second season, although they found several cuneiform tablets, none of them are clearly dated to the reign of Shamshi-Adad. The name of this ruler, or his son, Yasmah-Adad, does not appear in any of these tablets. The epigraphist at Chagar Bazar merely suggests that the tablets are dated in general to the First Dynasty of Babylon because they contain linguistic elements and month names that were not used until this period (Gadd 1937: 181). In sum, the content of these inscriptions makes it difficult to assign an exact date for the tablets and, therefore, the tombs that are said to be connected with or to pre-date these tablets also cannot be dated
accurately.

Over and above the uncertainties related to the stratigraphy and publication of the Chagar Bazar evidence as outlined above, there is a problem with accepting the close cultural and temporal relationship between Levantine Painted Ware and Habur Ware. Such an association was prompted by Amiran's discussion of similarities between Palestinian MBA pottery and pottery (Habur Ware) from the Assyrian Colonies at Kultepe (Amiran 1968: 59-62, 1969: 113), and has been generally accepted by other scholars (Gerstenblith, Dever). But Jonathan Tubb argues that the Palestinian MBA wares and Habur Ware are two separate and distinct traditions of painted pottery (1983: 55).

Levantine Painted Ware has been found in Palestine, the Syrian coast, at sites such as Beirut, Ras Shamra, Amrith and Byblos, and occasionally in the Orontes Valley, at sites such as Qatna and Hama (Tubb 1983: 52-54). The painted designs consist chiefly of horizontal bands of paint in black and red, and occur on jugs, piriform, spheriform and dipper juglets and handleless jars (Tubb 1983: 53). Also occurring are painted patterns of cross-hatched triangles and lozenges, painted collarettes on the necks of jars, and concentric circles or spirals, bordered by horizontal bands (Tubb 1983: 53). Finally, one occasionally finds broad, shallow bowls that have been decorated internally with a painted cross (Tubb 1983: 53).

Habur Ware is also characterized by band painting and simple geometric motifs arranged in continuous registers; but, according to Tubb, the resemblance is only superficial and is solely a function of the extreme simplicity of many of the designs of each group (Tubb 1983: 55). Moreover, Habur Ware lacks the characteristic Levantine motifs of concentric circles, spirals and collarettes and the use of bichrome decoration (Tubb 1983: 55). Lastly,
the vessel shapes upon which the painted decoration occurs are not similar at all and the parallels made by Amiran are not convincing (Tubb 1983: 55).

Perhaps most importantly, there is no region in the Near East where Levantine Painted Ware and Habur Ware overlap, a curious situation, if the two traditions are supposed to be related to one another. Examples of Levantine Painted Ware are present at Qatna and Hama in small numbers, but no further examples have been located further to the east in the Euphrates Valley. Meanwhile, while there are only very sporadic instances of Habur Ware in the Euphrates Valley (see p. 349), there are no known occurrences in the Orontes Valley to the west. Lastly, to the north of both cultural regions there is another painted ware known as the “Amuq/Cilician” tradition (Tubb 1983: 50), to which Habur ware bears no resemblance whatsoever (Tubb 1983: 55). Given this physical separation between the Levantine Painted ware and Habur ware, it is difficult to accept without question the two cultures’ close relationship and contemporaneity.

Thus, even if we were to resolve the stratigraphy of Chagar Bazar and verify the contemporaneity of Habur Ware and the Mari period, the whole correlation between Mesopotamia and the MBA of Palestine and coastal Syria breaks down with the rejection of the relationship between the Levantine Painted ware and Habur ware.

In summary, attempts to correlate the Mesopotamian chronological sequence with the Levant have proven unreliable. All suffer from lack of reliable supporting documentation. Albright’s scheme was based on a strained linguistic argument as well as the multi-dateable evidence from Byblos, possibly the result of mixed deposition or poor stratigraphic control over the excavations. The Hazor argument that Yadin proposes makes the presumption that
Hazor must have been a big city in order to have contact with Mari, and ignores the possibility of earlier MBIIA monumental architecture from that site. Finally, the connection between Habur Ware and Palestinian MBIIA ware is problematic, not only because of the Chagar Bazar stratigraphy and lack of sufficient detail in the publications, but also because there is no convincing evidence that the two painted ware traditions are directly related to one another.

To be sure, a correlation between Mesopotamia, specifically the Euphrates Valley, and Palestine is not a straightforward exercise. Even with the strategy devised in this study, which establishes temporal synchronisms between sites based on a number of shared ceramic features, does not work particularly well as one moves outside of the geographical and cultural limits of the Euphrates Valley of Syria. There are simply too many stylistic differences, and consequently not enough shared features among the pottery assemblages, to establish an undisputed relative chronology for each region. One can note that, even within the Euphrates region itself, a major cultural difference in pottery styles effectively separated the Big Bend region from the Mari area, making it difficult to draw fine chronological synchronisms.

VI.3 An Alternative Proposal for a Synchronism between the Levant and the Euphrates Region

While a direct correlation between the Euphrates Valley and the Middle Bronze Age of Palestine based on artifactual affinities is difficult, given the current evidence, an indirect synchronism is not altogether impossible. It was Jonathan Tubb who first proposed such a
scheme, arguing that a synchronism can be made by first determining how the artifactual assemblage of the Euphrates region relates specifically to that of the Orontes Valley, the region closest to the west of it, and consequently determining that region’s temporal association with the regions of the Levant (Tubb 1980: 64). A preliminary survey of the existing data suggests that such a strategy indeed provides a plausible correlation. In this regard, the evidence from the early Middle Bronze Age settlements of the Mari region, notably the Baghouz cemetery and Mari, were found to be best suited to this strategy, possessing the greatest number of artifactual features with which to establish temporal associations with the Orontes sites to the west.

The Mari Region and Mishrife/Qatna. Earlier in this study, it was determined that the Middle Bronze occupation at the site of Mari, contemporary with the rulers Shamshi-Adad and Zimri-Lim, is dated to approximately the same time period as the cemetery at Baghouz, and that both fall within the MBIIA period or, at the very latest, the period of transition between MBIIA and MBIIIB. This was determined by the large number of excellent pottery parallels between the two sites and their correlation with the pottery from Tell Hadidi, which has been assigned to the MBIIA period within the Euphrates sequence. Significantly, not only do Mari and Baghouz share ceramic affinities with one another, but both exhibit strong affinities with the pottery from the site of Qatna, situated across the Syrian steppe in the Homs Plain of the Orontes Valley region.

Qatna, otherwise known by its Arabic designation, Mishrife, is a large, square tell lying approximately 18 km northeast of the modern city of Homs. It is situated in a small valley that is fed by a tributary of the Orontes River. The site was investigated in the 1920s
by a French expedition led by Le Comte du Mesnil du Buisson, which made soundings in the main mound, and excavated a number of tombs in the surrounding region. Several of these excavated contexts were dated to the first half of the second millennium B.C. Included among them was Tomb 1, discovered near the base of the tell and cutting into a limestone glacis upon which a Christian church was later built (du Mesnil du Buisson 1927b: 40), and a contemporary context discovered at the base of a man-made hillock known as the “Coupole de Loth” (du Mesnil du Buisson 1927b: 62). Finally, investigations at the nearby site of Osmaniye led to the discovery of another second-millennium B.C. tomb. In all contexts, a sizeable quantity of comparable pottery was found, much of which was consequently published in du Mesnil du Buisson’s Qatna site reports (du Mesnil du Buisson 1927a: pls. VIII-XII; 1930: pls. XXXI-XXXIV, cols. 7-9).

Despite the significant geographical distance separating Mari and Baghouz of the Euphrates region and Qatna, pottery parallels among the sites are quite remarkable, as Table 30 demonstrates. One suspects that similarities in the cultural assemblages may have been the result of intense interaction between the Mari region and Qatna during the Middle Bronze Age. Certainly, textual sources from the Mari Archives confirm this interaction. Frequent letters of correspondence from the Mari Archives pertain to the establishment of diplomatic and commercial treaties between Shamshi-Adad and the king of Qatna. Moreover, the sources allude to a major overland trade route that crossed the Syrian desert between the Euphrates River and Qatna. This desert road seems to have been particularly popular during the time of Shamshi-Adad, as is known from letters dated to his reign which debate the suitability of water sources along the desert route (ARMT I:85), and warn of the hazards of
<table>
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<tr>
<th>Mari/Baghouz</th>
<th>Mishrife/Qatna and Osmaniye</th>
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<tr>
<td><strong>Mari: Parrot 1959: fig. 87: M.895</strong></td>
<td><strong>Mishrife, tomb 1: du Mesnil du Buisson 1927a: pl. IX, no. 1:2, 10, 79 and 81</strong></td>
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<tr>
<td><strong>Baghouz: du Mesnil du Buisson 1948: pls. LXVIII (all), LXIX: Z29, LXXI (all), LXXII (all)</strong></td>
<td><strong>Mishrife, below the “Coupole de Loth”: du Mesnil du Buisson 1930: pl. XXXIII, col. 8: 3rd-6th in col.</strong></td>
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<td><strong>Osmaniye, tomb 1: du Mesnil du Buisson 1930: pl. XXXIII, col. 9: top</strong></td>
<td><strong>Osmaniye: du Mesnil du Buisson 1930, pl. XXXI: col. 7: 41</strong></td>
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<tr>
<td><strong>Mari: Parrot 1959: fig. 83: M.859 and pl. XXXV: M.859</strong></td>
<td><strong>Osmaniye: du Mesnil du Buisson 1930, pl. XXXI: col. 7: 39</strong></td>
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<tr>
<td><strong>Mari: Parrot 1959: fig. 88: M.874; Lebeau 1983, fig. 3:4; 7:4</strong></td>
<td><strong>Mishrife, tomb 1: du Mesnil du Buisson 1927a: pl. 17, fig. 48, pl. XII, no. 1:86; ibid. 1930: pl. XXXIII, col. 7: 9</strong></td>
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<tr>
<td><strong>Baghouz: du Mesnil du Buisson 1948: pls. LXVI:Z280; LXXVII: Z289</strong></td>
<td><strong>Mishrife, below the “Coupole de Loth”: du Mesnil du Buisson 1930: pl. XXXIII, col. 8: 2nd in col.</strong></td>
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<tr>
<td><strong>Mari: bowl, not published, but on display in Aleppo Museum. Excavation number is M.32</strong></td>
<td><strong>Mishrife, tomb 1: du Mesnil du Buisson 1930: pl. XXXI, col. 7: 61 (jar with painted Catherine’s wheel)</strong></td>
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Table 30: Parallels between the Pottery from Mari and Baghouz and that of Mishrife/Qatna and Osmaniye
marauding tribesmen (ARMT V:23). Despite these hazards, the desert route no doubt afforded Shamshi-Adad access to the west and the coastal trade routes, and avoided the troublesome kingdom to the north, Yamhad, through which the other major road to the west passed.

The significance of the artifactual evidence from Qatna is that it also has undisputed parallels with the MBIIA culture of the Levant. The Middle Bronze contexts from Qatna yielded several examples of the distinctive MBIIA Levantine Painted Ware, as well as other forms that are considered fairly diagnostic of the Levantine MBIIA period. Among the painted ware one finds, for example, a handled jug characterized by a painted motif of hatched diamonds from Tomb 1 at Qatna (du Mesnil du Buisson 1930: pl. XXXII, col. 7: 85), which almost exactly duplicates a vessel from an MBIIA tomb at Gezer (Tubb 1983: 54; Macalister 1912: p. 298 and fig. 158:7). Two examples of vessels bearing simple band painting in alternating colours found at the tombs at Qatna and Osmaniye (du Mesnil du Buisson 1930: pl. XXXI, col. 7: 28 and XXXIII, col. 9: 10) also parallel the MBIIA Levantine tradition of bichrome decoration. Finally, shallow bowls decorated internally with crosses have been found among the pottery excavated below the “Coupole de Loth” at Qatna (du Mesnil du Buisson 1928: pl. LXXIX: 43, LXXXII:73), and parallel MBIIA examples of such bowls that have been found at Palestinian sites such as Tell Beit Mirsim (Stratum F, Albright 1933: pl. 5:5), Tell Poleg (Gophna 1973: fig. 5:4) and Gezer (Macalister 1912: pl. LXI:16). With regard to the unpainted wares, the Qatna contexts provide examples of collarette-rimmed juglets (du Mesnil du Buisson 1930: pl. XXXI, col. 7: 28), carinated bowls (du Mesnil du Buisson 1930: pl. XXXIII, col. 9:19) and carinated cups (du Mesnil du Buisson
1930: pl. XXXIII, col. 7: 4th in col., col. 8: 3rd-6th in col.), all of which fit well within the MBIIA pottery tradition known from Palestinian contexts (Megiddo and Ras el-Ain: see Amiran 1970, pl. 27: 1-4; Ginosaur, Tomb 1: see Epstein 1974: fig. 7: 4-13).

VI.4 Conclusion.

In summary, the Middle Bronze Age archaeological contexts at Qatna not only contain pottery with good parallels to pottery found at the Euphrates MBIIA sites of Mari and the Baghouz Cemetery, but also with MBIIA pottery known from the Levant. Given these correlations, one can safely state that the Qatna tombs, as well as the sites of Mari and Baghouz, are all contemporary with the Levantine MBIIA period. In conclusion, the period designated as the MBIIA (Cooper) in the Euphrates Valley has a strong correlation with the MBIIA of the Levant.

Significantly, additional supporting evidence for this correlation between the MBIIA of the Euphrates Valley and the MBIIA of the Levant comes from other evidence excavated at Baghouz. As has already been noted, “duckbill” axes were found in eleven of the Baghouz tombs. According to the majority of scholars, these distinctive axes are very characteristic of the Levantine MBIIA period, and rarely, if ever, occur later than this time (Philip 1989: 50; Gerstenblith 1983: 89; Oren 1971: 111-14 and Dever 1992: 8). Moreover, the architecture of the Baghouz tombs is also related to the Levantine MBIIA period (Tubb 1980: 63). The tombs, which consist of a stone-lined pit roofed over with large slabs and covered with a cairn, are well known from Levantine sites such as Yabrud (Assaf 1967: Abb. 1-2), Ras el-Ain (Ory 1938: 99-120, figs. 3-6) and Gezer (Macalister 1912: fig. 158). The vessels found
within these tombs are all characteristic of the MBIIA period.

In summary, the chronological study presented above has generated some valuable conclusions. Perhaps most important is the fact that the period of the Mari Archives, coinciding with the reigns of Shamshi-Adad and Zimri-Lim, is contemporary with the MBIIA period of the Levant. Thus, the city of Hazor mentioned in the Mari letters must not be the one characterized by the MBIIB fortifications and monumental structures favoured by Yadin, but by an earlier settlement of which little is yet known. Given this situation, perhaps the prosperous MBIIB settlement at Hazor should be regarded as the result, rather than the cause, of economic and political relations with its Mesopotamian neighbour to the east.
CHAPTER VII
EUPHRATES VALLEY INTERACTION AND CULTURAL EXCHANGE DURING THE MIDDLE BRONZE AGE

VII.1 Introduction.

The aim of the previous chapters of this study was to compile and organize archaeological data, principally pottery, from early second-millennium sites within the Euphrates Valley. Through an analysis of relative dating and of correlations between the material evidence and absolute dates provided by contemporary textual sources, the study has attempted to fix each of the Middle Bronze Age Euphrates sites and their pottery assemblages in a chronological sequence. This chronological investigation has facilitated the assignment of the bulk of the excavated Euphrates pottery to at least three sub-phases of the Middle Bronze Age (MBI IA, MBI IA/IIB, MBIIB) on the basis of ceramic developments. Moreover it has been possible to establish which settlements or occupations within the Euphrates Valley were contemporary, as well as some understanding about the historical context in which these settlements existed.

It is now possible to proceed with the final objective of the study, which is to investigate and assess aspects of cultural interaction and exchange among the Euphrates Valley settlements. To be specific, this chapter seeks to find particular contemporary "cultural" identities or groupings among the Euphrates sites and then to discuss whether these cultural groupings can be correlated either with particular human groups or with distinctive patterns of human behavior and activity.

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The chief archaeological artifact of this investigation is pottery, specifically, the stylistic information that pottery communicates through its various forms and decorations. This is quite different from information on pottery technology (how it was made), and pottery function and use, although one might well argue that, among the essentially utilitarian pottery types of the Euphrates, the style or appearance of a pot is directly related to its function.

The detection of “cultural” interaction and cultural groupings is based on similarities among the stylistic features recognized on types within each of the sites’ ceramic assemblages. I argue that the presence of similar styles in pottery from different sites indicates the existence of some form of cultural relationship and thus human interaction between the sites; furthermore, the number of similar features within the assemblages of individual sites indicates the degree or strength of that cultural interaction. Finally, if one can detect a distinct, or non-random pattern in the distribution of similar artifact features among a finite number of sites, then it may be reasonable to posit the identification of a distinct material cultural group which may prove to have some relation to a particular ancient human group.

In the Near East, specifically in Greater Mesopotamia, several instances may be cited in which an ancient “culture” has been identified based on the distribution of a distinctive artifact. For example, archaeologists have referred to sites in northern Mesopotamia, where a distinctive third-millennium, painted and incised pottery has been found, as belonging to the “Ninevite 5” culture (Mallowan 1964; Schwartz 1988; Roaf and Killick 1987). Similarly, certain second-millennium B.C. artifactual assemblages characterized by a red, painted pottery have been assigned to the “Habur Ware” culture, named after the Habur River region of northeastern Syria, where that type of pottery was first excavated (Mallowan 1936; 1937;
Hrouda 1957). More recent attempts to identify and define artifactual "culture" groupings include S. Mazzoni's treatment of the Early Bronze IV period in Syria, in which she has defined separate regional cultures that are characterized by particular combinations and variations of decorated and simple ceramic wares (Mazzoni 1985a). In her analysis, Mazzoni distinguishes between eastern and western ceramic regions in Syria (the coastal and north/central regions of Syria versus the north-eastern region of Syria), while regarding the entire Euphrates Valley as a dividing line or resistant buffer zone between them (Mazzoni 1985a: 11; Jamieson 1991: 38).

Despite efforts to identify and describe an ancient material "culture" based on the peculiar distribution of artifact types over a finite geographical space, only recently have scholars made a concerted effort to understand how these apparent "cultures" relate, if at all, to specific types of social groups and forms of human behavior. In light of the precarious nature of interpreting ancient human modes of behavior on the basis of the silent material record, a variety of supporting methodological approaches have been introduced. These include, for example, searching contemporary textual sources for information that describes a human action or mode of behavior that appears to be reflected in some aspect of the artifactual record (the "direct historical approach," Voigt 1990: 34). Another form of enquiry, particularly popular with prehistorians, is to formulate explanations of ancient cultures based on analogies with modern human groups that are thought to exhibit similar lifestyles and social organization, and who live under the same environmental conditions as the ancient human groups under investigation. Inquiries such as these, which have successfully documented the existence of a wide range of human behavioral patterns and
adaptations and their manifestation in material objects, have provided useful paradigms for archaeologists in their consideration of ancient "cultures."

Among the assortment of hypotheses available to define a "culture," perhaps the most popular suggestion is that artifact types and particular forms of artifact distributions are identifiers of particular ethnic groups. Ethnic identity manifests itself in a set of fundamental, relatively uniform cultural values including language and ideology, as well as the existence of a common ancestry, real or fictitious (Barth 1969; Kamp and Yoffee 1980: 88). Thus, the artifacts manufactured and used by an ethnic group, or the unique way in which they decorate an artifact, i.e., its "style," can be seen as a material manifestation of the ethnicity and identity of that population, although it remains to be decided whether that style is a conscious and active expression of the identity of the group, or whether it is "isochrestic" or passive (Shennan 1994: 18-21).

Several attempts to prove that the distribution of a particular artifact style is linked to the existence of a specific ethnic group have been successful. Polly Weissner, in her study of the !Kung San of the Kalahari Desert in Africa, for example, has found a relationship between the way in which tribal components of the San manufactured their projectile points and their particular language groups (Weissner 1983: 153-76). Similarly, Ian Hodder, in his study of modern population groups in the Baringo District of north-central Kenya, noted that the local tribes each have their own distinctive styles of dress (notably ear ornamentation), drinking cups, wooden eating bowls, shield types, and in some cases, clay pots (Hodder 1982: 2, 40). Hodder's study is also important in that he was able to observe that overt ethnic identification among the tribal groups through their material culture increases or decreases
in strength according to the degree to which they are in competition with one another over land and food resources (Hodder 1982: 35).

In addition to an investigation of the relationship between material culture and ethnicity among modern groups, there have been attempts to associate distinct artifact types with ethnic groups in the archaeological record. Perhaps the most widely discussed and debated Near Eastern example of ethnicity in recent times is that of early Israel at the beginning of the Iron Age in Palestine. It would seem that an increasing number of archaeologists are prepared to accept that the late thirteenth- and early twelfth-century B.C. village settlements of the hill country of Palestine, extending from Upper Galilee, through the central hill country of Samaria and Judea as far as the northern Negev hills, were populated by early "Israelites" (Dever 1995: 208). This population of "Proto-Israelites" can be identified mainly through their pottery, their rural subsistence system, characterized by small-scale, terrace horticulture and herding, and their distinctive courtyard house-plan and village layout (Dever 1995: 208; Holladay 1995: 387-88). Moreover, solid support for the existence of a population group known as Israel at this time comes, not from Biblical sources, which should be regarded as literature that does not necessarily reflect real life directly or accurately, but from a contemporary historical text known as the Merneptah Stele, dated ca. 1207 B.C., that lists "Israel" as a group of people threatening the security of Egypt's empire (Dever 1995: 209).

Another intriguing discussion of the reflection of ethnicity in the archaeological record is Jane Moon's survey of the distribution of Early Dynastic upright-handled jars and stemmed dishes in southern Mesopotamia (Moon 1982: 39-69). She was able to show, that while
stemmed dishes occur at most sites throughout the region, upright-handled jars occur only in Akkad, the Diyala region, Mari, and sites north of and including Nippur and Abu Salabikh (Moon 1982: 66). Interestingly, this north-south distribution of pottery matches extremely well the posited dividing line, based on literary traditions and scribal conventions, between the homeland of the Sumerians in the south (al-Hiba, Ur, al-'Ubaid) and Semitic-speaking Akkadians of the north (Moon 1982: 67-68).

Recent studies have shown, however, that not all material “cultures” owe their existence to ethnic distinctions and that there are other factors which can stimulate the development and maintenance of a particular “culture.” In the Near East, this point can be illustrated by an examination of the Early Bronze IV culture of Palestine at the end of the third millennium B.C. This culture, characterized by a seemingly new and radically different settlement arrangement and material culture, was thought to be related to the arrival of the Amorites, a new ethnic group (Lapp 1970: 114-15; Kenyon 1971: 594). These Amorites were thought to have originated in the steppe land of Syria and to have brought to a violent end the Early Bronze urban culture of Palestine through a series of nomadic invasions, replacing it with their own ethnic cultural system, which is evident in the material culture, notably the pottery (Dever 1980: 53).

Recent studies of the Early Bronze IV period, however, have forced most scholars to reject this “Amorite” hypothesis. The introduction of a new and distinctive material culture at the end of the Early Bronze Age is seen now as a manifestation of an internal development caused by the collapse of the Early Bronze III system. At that time, there was a shift from centralized urban settlements to small dispersed villages. This was accompanied by a shift
from agriculture to herding and dry-farming. The causes for this urban collapse are unknown, although it is suspected that they were triggered by:

- political misfortunes, economic reverses, a series of natural calamities such as drought or pestilence, by overpopulation of urban centres and exhaustion of natural resources, or some combination of these and other factors (Dever 1980: 58).

In summary, the presence of a new “culture” in Palestine at the end of the Early Bronze Age is probably not related to the arrival of a new ethnic element, namely the Amorites. Rather the EBIV culture evolved in response to a series of complex social and economic internal factors (Kamp and Yoffee 1985: 97-99).

Some would argue that the development of distinctive material “cultures” is a result of the adaptations that human populations make to their unique environments. Certainly this idea is integral to the above explanation of the EBIV culture in Palestine, which is thought to have originated, in part, as a response to drought or pestilence. The idea that culture is shaped by environmental or ecological factors is not new. In fact, Childe offered this opinion at least 40 years ago:

Material culture is ... largely a response to an environment: it consists of the devices evolved to meet needs evoked by particular climatic conditions, to take advantage of local sources of food and to secure protection against wild beasts, floods or other nuisances in a given region (Childe 1948: 20-22).

This environmental-determinist approach to culture has had several followers. For example, Bishop and Smith, in observing tribal units in north-western Ontario, argue that the
ethnic/cultural boundaries between groups correspond well with ecological boundaries in this region (Bishop and Smith 1975: 54-63). In another example, D. Arnold shows how three Pokom communities of the Valley of Guatemala, although sharing the same language and ancestry (Arnold 1978: 42), have markedly divergent pottery traditions. Arnold shows how these pottery differences are directly related to the types of raw materials available to each individual community. These divergent resources explain why the potters employ differently tempered pastes (Arnold 1978: 44) and different decorative techniques in their vessels (Arnold 1978: 45-46).

Recently, a third explanation for "culture" has been postulated in the archaeological/anthropological literature. It focuses on the strength with which political distinctions and political boundaries affect the development and maintenance of separate material cultural traditions. Distinct cultural groups do not necessarily have to be connected to the existence of separate ethnic entities, nor must they have any relationship to the exploitation of and adaptation to a particular ecological niche. Their existence is simply due to the establishment and maintenance of separate political principalities within a region.

Ian Hodder and others have recognized that political distinctions can create barriers to cultural diffusion in various regions (Hodder 1978: 255-56), but, this idea has not been tested through studies of modern groups, and it has been frequently ignored as a force behind cultural distinctions in the archaeological record. Nonetheless, the idea seems equally provocative and no less valid than the other factors described above.

Interestingly, it is among studies of the Near East that one finds the greatest discussion of the correlation between material "culture" and human groups defined by
political developments and boundaries. For example, Robert Mason, in his study of lustre-ware pottery in the Islamic period, noted that between about 975 and 1175 A.D. this elite ware was produced exclusively by the Fatimid Empire of Egypt at the city of Fustat (Mason 1996: 10). Moreover, the pottery from Fustat had a restricted distribution, consisting only of areas within Fatimid political control (including Palestine, down the Red Sea to Yemen), and areas in the Mediterranean that were trading partners with the Fatimid Empire (Mason 1996: 11). In this example, therefore, the production and distribution of pottery are seen to be in close association with one specific political entity.

Another relevant example is Carol Kramer’s study of the pottery known as Habur Ware, which has been found at several early second-millennium B.C. sites in northern Mesopotamia (Kramer 1977: 91-112). Kramer rejects the hypothesis that an ethnic group known as the Hurrians were responsible for the appearance and distribution of Habur Ware. She suggests instead that the distribution of pottery reflects the political extent of the Assyrian Empire under Shamshi-Adad I, since it occurs only at sites that are known from contemporary textual sources to have been under his political control (Kramer 1977: 104). Kramer’s Habur Ware hypothesis is no longer tenable, as will be discussed later on in this chapter, but at the time of its proposal it was considered a viable and provocative alternative to previously-held notions about the existence and distribution of this distinctive pottery “culture.”

Investigation of Middle Bronze Euphrates “Cultures”. The first two explanations for the presence of distinct “cultures” within the material assemblages of contemporary sites,
which were described above, are not applicable to the Syrian Euphrates Valley of the Middle Bronze Age. The first explanation, ethnic diversity, is not relevant to this region or time period. Textual sources indicate that virtually all of the area of the Euphrates Valley of Syria of the early second millennium B.C. was settled and dominated by a single ethnic group, the Amorites, who shared a common language as well as similar religious and social institutions.

The second explanation, which seeks to correlate cultural differences with separate environmental adaptations, also does not apply to the region under investigation. The Euphrates Valley comprises an essentially uniform environment within Syria. The floodplain in this region receives the same quality and quantity of alluvial soil deposition (very little), and there are few divergent ecological niches. Moreover no area has significantly greater access to cultivable land than any other area. The floodplain is narrow throughout, owing to the absolute boundaries created by the escarpments of the Syrian and Jezirah deserts which extend along the entire course of the Euphrates as it flows through Syria. While the “Big Bend” region receives a somewhat higher mean annual rainfall than does the Mari region, it is neither sufficient nor dependable enough to practice dry-farming without some additional source of irrigation. Thus, it is highly unlikely that the northern Euphrates Valley’s overall agricultural yield per capita was significantly greater in antiquity than that generated by the Mari region to the south. Given these factors, it is difficult to argue for the presence of distinct “cultures” on the basis of separate environmental adaptations along the Euphrates River.

The remaining explanation, which argues that political developments are responsible for the formation and maintenance of distinct “cultures,” was considered a possibility.
Fortunately, the Euphrates Valley of Syria consists of a representative repertoire of Middle Bronze Age artifactual assemblages from several contemporary settlements that has a direct relationship with a rich source of historical documentation. This documentation, above all, emphasizes political developments and distinguishes among the various political principalities of the Euphrates Valley of this period. Consequently, it was possible to test the degree to which material “cultures” of the Euphrates Valley were defined by the political landscape through a study of a combination of these two sources of complementary evidence.

Unfortunately, the results of this study were discouraging. Pottery from the Middle Bronze sites could not be fitted within well-defined “culture” groups on the basis of distinct forming and stylistic characteristics at all. Rather differences among the assemblages appeared, for the most part, to be related to propinquity. Pottery assemblages that were near to one another along the Euphrates River tended to be more similar than assemblages that were separated by large distances. Given this pattern, in which individual cultures could not be distinguished, there were no grounds for accepting the third explanation. There was no detectable correlation between the division of the region into separate political principalities and the presence of separate and distinct material cultural styles within the Euphrates Valley, at least on the basis of the ceramic evidence.

In contrast, a closer investigation of distinctive similarities among particular elements of the pottery assemblage pointed to the existence of a different type of economic/political configuration for the Euphrates Valley during the Middle Bronze Age. In this scheme, known as Peer-Polity Interaction, separate political entities did not maintain separate cultural traditions. On the contrary these entities shared and emulated one another’s cultures. This
kind of situation is thought to prevail where political units are equal, particularly in terms of economic and political power. It would appear that some, but not all, aspects of the material culture reflect the operation of Peer-Polity Interaction that existed among the autonomous kingdoms of the Euphrates Valley during the Middle Bronze Age. This operation of interaction is reflected by the standardized appearance of Middle Bronze “wine” jars, and their distribution throughout the Euphrates Valley, as well as similarities among other types of artifacts, as will be outlined below.

Outline of Investigation. The remainder of this study outlines in detail the investigation that was described above, in which a correlation is sought between the material culture of the Euphrates Valley, specifically pottery, and the division of the region into separate political powers. First, the historical background of the Euphrates Valley at the beginning of the second millennium B.C. is described, based on information from Akkadian sources from Mari, Terqa, Tuttul, and other contemporary settlements. The foci are historical texts that document how the Euphrates region was demarcated and divided into the various political principalities of the time. The time period covers the first 400 years of the second millennium (2000-1600 B.C.) Fortunately, textual sources for this period contain very useful information about military campaigns, diplomatic relations between kingdoms, border skirmishes and territorial claims. Consequently, it has been possible to reconstruct the political environment of this period with reasonable success.

Next the archaeological evidence is assessed in light of this historical situation. In particular I show why it is impossible to delineate separate pottery cultures among
contemporary Middle Bronze Age sites and, consequently, why one cannot find a correlation between distinctive styles of pottery and the various political principalities that existed during this period. The study proceeds with some alternative explanations for the nature and distribution of the pottery, along with an in-depth study of the Middle Bronze Age Euphrates “wine” jar, which is thought to reflect the operation of Peer-Polity Interaction.

VII.2  Historical Survey of the Syrian Euphrates Valley in the First Half of the Second Millennium B.C.

This section describes the political/historical developments that took place in the Euphrates Valley of Syria during the first half of the second millennium B.C. based on information from contemporary textual sources. In particular, it emphasizes how the region was divided into separate political principalities and attempts to locate the boundaries between these units. A map illustrates the geographical area discussed in this section (Fig 30).

The First 200 Years of the Second Millennium B.C. Historically, very little is known about the opening years of the second millennium B.C. in Syria, although from contemporary southern Mesopotamian texts we know that the period was marked by the arrival of Western Semitic peoples in the Tigris-Euphrates Valley. These Semitic groups, otherwise known as the Amorites, were able to establish powerful dynasties in Mesopotamia. The city-states of Isin and Larsa, for example, passed into the hands of Amorite chiefs, while other Amorite leaders took control of Babylon, Kish, Kazallu, Marad, and Uruk. In all likelihood, the
Fig. 30: Map of Syria showing Major Settlements of the Early Second Millennium B.C. (Middle Bronze Age), as known from Textual and Archaeological Evidence.
situation in Syria was quite similar. New groups of Amorites, taking advantage of the power vacuum caused by the collapse of the earlier Bronze Age city-states, established themselves as the successors of the previous Syrian dynasties, and developed into powerful political entities in their own right.

It may be possible to see early glimpses of this Amorite emergence in Syria at Ebla, where an inscription on a stone statue records that a certain Amorite by the name of Yibbit-Lim was that city's ruler. The inscription may date back to some time in the 20th century B.C. (Klengel 1992: 39-41). In all likelihood, an Amorite dynasty established itself at the city of Aleppo (Halab) at this time, for within only a few centuries that city had become the capital of Yamhad, the most powerful Amorite kingdom west of the Euphrates River. Unfortunately, the names of early Yamhad's rulers and the extent of their territory is still unknown. The picture at Mari is equally unclear. A century of darkness follows the period of the shakanakus, who controlled Mari until around 1938 B.C. (Durand 1985: 166-68). One can only assume that during this time the power of Mari was seriously weakened by the emergence of a new Amorite power in the area (Durand 1985: 160). Whatever was the case, by around 1815 B.C., the city of Mari had fallen under the control of the Amorite leader Yahdun-Lim, son of Yaggid-Lim. Mari had become Yahdun-Lim's new residence and the capital of a large and powerful kingdom.

Despite the establishment of power at cities such as Mari, Aleppo, Qatna and Carchemish, groups of semi-nomadic Semitic peoples continued to inhabit large tracts of semi-arid pasture and to possess agricultural lands and towns on either side of the Euphrates River along its entire length within Syria. The texts from the Mari period record the names
of the most prominent tribal groups of this time. They included the Haneans who occupied the land chiefly around Mari and Terqa as well as the Habur River basin (Kupper 1957: 1-15); the Yaminites (Benjaminites), who occupied the Euphrates Valley and the steppe land to the northwest of Mari, particularly the land around the Balikh basin (Kupper 1957: 47-81); and finally the Suteans, who chiefly resided in the steppe land to the west of Mari, around the base of Jebel Bishri, the oasis of Tadmer (Palmyra) and as far as Qatna in the west (Kupper 1957: 83-94).

Yahdun-Lim of Mari (1815-1801 B.C.). It is with the reign of Yahdun-Lim that the territorial limits of various Syrian principalities are reported, or at least suggested, in the textual record. The most important historical texts from this time are the royal inscriptions of Yahdun-Lim, found at Mari. They provide useful information about the extent of the Mari empire during his reign.

In his famous “discus” inscription, inscribed on the head of a large cone (Thureau-Dangin 1936: 49-54; Frayne 1990: 602-604), Yahdun-Lim boasts that he is “king of Mari, Tuttul and the land of Hana, mighty king, who controls the banks of the Euphrates” (lines 1-8). Further down, the inscription reads, “seven kings, leaders of Hana who had fought against me, I defeated. I annexed their lands” (lines 15-20). The inscription also reports how Yahdun-Lim built a city called Dur-Yahdun-Lim in an arid and hostile land and dug a canal for it (lines 35-49).

The royal inscription thus provides some information about the territories that Yahdun-Lim conquered and was able to incorporate into the kingdom of Mari. It included the
land of Hana, the tribal territory belonging to a semi-nomadic group called the Haneans and identified as the area around the city of Terqa on the Euphrates River above Mari (Charpin and Durand 1986: 143). Yahdun-Lim also conquered Tuttul, which is now known to be the site of Tell Bi’a situated on the confluence of the Balikh River and Euphrates River upstream from Terqa. The city of Dur Yahdun-Lim, which was built during the king’s reign, is thought to be somewhere in the vicinity of the confluence of the Habur and Euphrates rivers. It is currently equated with the site of Tell Mohasan (Geyer and Monchambert 1987: 325).

The other important inscription from the time of Yahdun-Lim was found on foundation bricks of the Shamash Temple at Mari (Dossin 1955: 1-28; Frayne 1990: 604-608). These inscriptions report that, during his reign, Yahdun-Lim went to the shore of the Sea, that he entered the mountains of cedar and boxwood and cut down the trees, and that he caused the land on the shore of the seas to submit and imposed a tribute on the people of this land (lines 51-66). The inscription is almost certainly reporting an expedition of Yahdun-Lim up to the Mediterranean Sea and his exploitation of valuable timber from the Amanus Mountains of Lebanon. Yahdun-Lim was thus following in the footsteps of earlier Mesopotamian kings, whose inscriptions frequently boast of successful campaigns to the Mediterranean Sea (e.g. Sargon and Naram-Sin). There is no reason to question the historicity of the text, but we doubt that the kingdom of Mari was able to achieve a prolonged or lasting jurisdiction over the coastal lands to the west of the Euphrates as a result of this campaign. It is more likely that Yahdun-Lim’s conquest was a short-lived victory; probably after the tribute had been paid and Yahdun-Lim had returned to Mari, the coastal area
reverted back to local rulers or fell under the jurisdiction of the newly consolidated kingdom of Yamhad.

The inscribed foundation bricks also report that, in the same year that Yahdun-Lim made his trip to the Mediterranean Sea, the kings of Samanum and the land of the Ubrabium, Bahlu-Kulim, king of Tuttul and the land of Amnanum, Aialum, king of Abattum and the land of the Rabbum, rebelled against him (lines 67-91). Furthermore, Sumu-epuh, the king of Yamhad, provided the enemy forces with auxiliary troops. Despite this formidable opposition, however, Yahdun-Lim was able to defeat the coalition of kings at Samanum, thus imposing his rule over a wide area of the Syrian Euphrates Valley.

The conquered lands described in the foundation inscriptions above largely concur with the information reported in the “discus” inscription. Samanum and the land of the semi-nomadic tribe of the Ubrabium, are to be located in the area around Terqa, while Tuttul and the land of the tribal group Amnanum is the area around Tell Bi’a at the confluence of the Balikh and the Euphrates Rivers (Astour 1978: 1-2). Two new pieces of information, however, are also reported: a) that the kingdom of Yamhad existed at this time, ruled by Sumu-epuh and b), that among the defeated enemy alliance was the king of Abattum and the land of the Rubbum.

Unlike Terqa and Tuttul, the location of the city and territory of Abattum is uncertain, although various textual sources provide some helpful clues. For example, sources from Mari indicate that the Rubbum, or the Rabbeans as they are better known, were a pastoral nomadic group related to the Yaminites, who dwelt chiefly in the land of Yamhad, located west of the Euphrates River and northwest of Mari (ARM I 6; Kupper 1957: 53). Thus the city of
Abattum, which appears to have been the capital city of the Rabbeans in the time of Yahdun-Lim, must also be located in this region.

Additional information about the location of the town of Abattum comes from an Old Babylonian itinerary (Hallo 1964: 57-88). This itinerary, which is thought to describe the journey of an important king of Larsa up to Syria (possibly Rim-Sin of Larsa, circa. 1763 B.C.; Hallo 1964: 85), lists all of the stops along the route from Larsa to the city of Emar on the Euphrates (positively identified with the site of Meskene/Balis; Margueron 1975: 53-85) and back, and the number of days between each of the stops. This itinerary lists Abattum as a two-day journey from Tuttul and two stops before Emar, the final destination (Hallo 1964: 64). The other stops between Tuttul and Emar in the itinerary are reported as being along the banks of the Euphrates River (GÚ 4D.K.B NUN.KI), implying that the route followed the course of the river rather than reaching Emar via an overland track. Thus, the itinerary implies that Abattum was located on the Euphrates River upstream from Tuttul but not as far as Emar (Meskene).

The town of Abattum is also mentioned in a later letter, written by king Shamshi-Adad to Yasmah-Adad concerning his son’s planned march to the city of Qatna in the west (ARM I 85+A. 1195; recent edition by Durand 1987: 163-67). After reminding his son of his inexperience regarding routes across the Syrian desert, Shamshi-Adad emphasizes the importance of retrieving accurate information about the desert roads and knowing of available water sources en route. It would appear that Yasmah-Adad had a choice of three routes to the west; the lower route (KASKAL șa-ap-li-tu-ù-um) departed from the vicinity of Dur Yahdun-Lim (according to Durand 1987: 161); the middle road (KASKAL qa-ąb-li-tu-ù-um)
from Halabit, which is located further up the Euphrates River at modern Halabiyé/Zénobiyé, and finally the upper road (KASKAL e-li-tu-ii-um), which departed from Abattum, after the army had made its way and assembled at Tuttul (lines 36 and 47). Like the Old Babylonian itinerary, the text indicates that Abattum was located above Tuttul. Furthermore, Abattum must have been located on the right bank of the Euphrates River since it served as the starting point for the army’s march across the Syrian steppe to the west.¹

Although the general location of Abattum is known, its precise whereabouts is still unconfirmed. Charpin suggests that the town was situated opposite the medieval fortress of Qala’at Jabbar, in the vicinity of the modern town of Tabqa (Charpin 1993: 26). Alternatively, Astour proposes that the site should be equated with the nearby site of Tell Tadyyen, where pottery attributed to “Babylonian times” has been collected (Astour 1978:2).

Thus, Yahdun-Lim’s kingdom probably reached Abattum on the right bank of the Euphrates River, or perhaps extended even further, as far as Emar. This is suggested by one of the year names from the reign of Yahdun-Lim, recorded as “the year when Yahdun-Lim effected the defeat of Emar” (Dossin 1950: 52). Since no other inscription from this time verifies that Emar was incorporated into the Mari kingdom, the impact of Yahdun-Lim’s conquest of Emar is not clear. One wonders if this defeat resulted in only a short-lived or temporary annexation of that city, or perhaps no annexation at all.

Final information about the extent of Yahdun-Lim’s kingdom may be gleaned from letters written by a vassal ruler named Abisamar. In these letters Abisamar asks for Yahdun-Lim’s help against the Assyrian aggressor Shamshi-Adad, who is seen making territorial advances in his neighbourhood (ARM I 1-2; Klengel 1992: 50). In the letters, Abisamar
makes reference to an earlier attack of enemy forces from Hashum, Urshum, Carchemish and Yamhad. For one of Yahdun-Lim's vassals to have come into contact with distant kingdoms such as Carchemish (located on the upper Euphrates River just below the modern border between Syria and Turkey) and Urshum (possibly located in the Euphrates Valley in southern Turkey; Klengel 1992: 74) implies that at least at some point in time the Mari kingdom extended far to the north along the Euphrates Valley. One can suggest that, while the kingdom of Yamhad almost certainly controlled all of the right bank of the Euphrates River, at least between Carchemish and Emar, Yahdun-Lim's kingdom may have controlled all of the opposite left bank.

To summarize the political situation in Syria during the reign of Yahdun-Lim, it would appear that Mari controlled both sides of the Euphrates River up to the town of Abattum, and quite possibly as far as Emar. The newly consolidated kingdom of Yamhad is first mentioned at this time, with king Sumu-epuh at its head. In all likelihood the territory of Yamhad, with its centre at Aleppo, extended along the right bank of the Euphrates River between Emar and the kingdom of Carchemish. Mari, on the other hand, controlled all of the left bank of the Euphrates River above Emar, as far north as, or perhaps even beyond, Carchemish.

Shamshi-Adad I (at Mari: 1798-1775 B.C.). The reign of Yahdun-Lim at Mari was brought to an end by his death around 1801 B.C., the circumstances of which are not entirely clear.⁴ He was succeeded by his brother Sumuyamam, but this ruler was unable to stop the ambitions of the Assyrian king, Shamshi-Adad, who annexed Mari a few years later and established his dominion over it. Prior to his conquest of Mari, Shamshi-Adad had
successfully conquered the city of Ekallatum on the Tigris and, a few years later, took the city of Assur. By the time of his conquest of Mari, three capital cities had been established at the corners of his vast empire. These were Ekallatum on the Tigris River in the east, Shubat-Enlil in the north (Tell Leilan) and Mari in the west. As a means of successfully governing these cities and their territories, Shamshi-Adad’s sons were installed as vice-regents. In this way, Shamshi-Adad’s son Yasmah-Adad became ruler of the territory of Mari.

Confirmation that Shamshi-Adad’s kingdom extended to the Euphrates River is indicated by several textual sources. We know certainly that Shamshi-Adad controlled Tuttul; there are several letters and administrative texts that allude to the existence of Mari governors and officials posted at Tuttul (eg. ARM I 18; I 62). That the Assyrian kingdom extended even further up the river than Tuttul is suggested by the letter discussed above, in which Shamshi-Adad advises his son on which route to take across the Syrian steppe (ARM I:85 + A.1195; recent edition by Durand 1987: 163-67). The fact that the upper route included a point of departure for Yasmah-Adad’s army from Abattum suggests that this town was within the confines of the Assyrian empire. Finally, two letters imply that the city of Emar may have been, at least for a short time, under Assyrian jurisdiction. For example, in a letter (A.2560) from the governor Sin-tiri, who ruled from the city of Shubat-Shamash on the Balikh River and was probably responsible for all of the region between the Balikh and the Euphrates Rivers (Villard 1990: 562; Anbar 1973: 21), he reports that he sent a message to his lord (Yasmah-Adad) at Emar (Charpin and Durand 1986: 182). Further allusions to an Assyrian presence at Emar is provided by ARM VII 7, which concerns a shipment of oil that was received by a certain Anaku-Ilum-na “because the king has gone to Emar” (Durand 1990: 62).
These letters are highly suggestive; unfortunately there is no further information about Shamshi-Adad or Yasmah-Adad's presence at or jurisdiction over that city.

It would appear that the Assyrian empire was hostile towards Yamhad during the reign of Shamshi-Adad. The enmity that existed between these two kingdoms is clearly expressed in several documents. For example, ARM I 24 reports how Shamshi-Adad, Yasmah-Adad and the principalities of the North (Carchemish, Urshu and Hashum) created a confederacy against Sumu-epuh, the king of Yamhad (Klengel 1992: 54). In another letter, ARM I 43, the planned presence of Yasmah-Adad at Tuttul is reported, and there is expressed the hope that his arrival would force Sumu-epuh to withdraw from positions in the neighbourhood (Klengel 1992: 54; Villard 1990: 569). It is uncertain that the two opposing kingdoms were ever engaged in a decisive battle, although letters from Mari report razzias in the border areas (ARM I 91) and the capture of enemy fortresses (ARM I 43).

The hostile relations between Assyria and Yamhad may explain Shamshi-Adad's friendly attitude towards the kingdom of Qatna, Yamhad's neighbour to the south. The city of Qatna was located at the centre of the fertile plain of Homs, at the site of modern Mishrifeh (du Mesnil du Buisson 1935). To the north, its border with Yamhad was probably located south of Hama while its western border may have extended as far as the Mediterranean Sea. To the east, Qatna was separated from the kingdom of Mari by the expanse of the Syrian desert. Assyria and Qatna's friendly relations are reflected in communiqués between Shamshi-Adad and Ishhi-Adad, king of Qatna, who address each other as "brother" (ARM I 24; Munn-Rankin 1956: 76). We also know that Shamshi-Adad
arranged a dynastic marriage between his son and the daughter of Ishhi-Adad (ARM I 46, I 77, II 51).

By allying himself with Qatna, Shamshi-Adad was securing an open route through which he could establish diplomatic and trade relations with the West, particularly the coastal regions of the Levant (Klengel 1992: 53). Such a route to the west crossed the Syrian steppe from the Euphrates Valley, stopping at a number of desert oases, including Tadmer/Palmyra, before reaching Qatna. This road would have avoided the alternative route through Yamhad territory in the north. Despite potential dangers posed by hostile nomadic tribesmen (ARM V 23) and the lack of adequate food and water provisions (ARM I 85 + A.1195), we know that this desert route was frequently taken by emissaries and caravans from Mari during Shamshi-Adad’s reign (ARM I 7, I 24, I 66).

Because of the hostile relations between Shamshi-Adad and Yamhad, the territory between the Assyrian empire and Yamhad was carefully demarcated. This is implied by texts such as ARM I 6 (a letter of Shamshi-Adad to Yasmah-Adad), which discusses a group of Rabbean tribesmen “who live on the other bank, in the land of Yamhad” (LÚ.MEŠ ra-ab-ba-yu ša i-na e-bi-ir-tim i-na ma-a-at i-a-am-ha-ad K1 wa-aš-bu; collation in Astour 1978: n. 20). This letter also verifies that the Euphrates River served as the political boundary between the two kingdoms, at least along part of its course.

Of interest is a letter from Shamshi-Adad in which he discusses a plan to get Sumu-epuh, the king of Yamhad, to abandon his conquests, namely two forts called Dur-Addu and a citadel that carries his (Shamshi-Adad’s) name (ARM I 43; recent edition by Villard 1990: 568-69). The letter thus implies that the fortresses were located in an area of tension between
Mari and Yamhad. Interestingly one finds mention of a Dur-Shamshi-Adad in another text from Mari (M.6669) in which its location in the western part of the empire is verified by the fort’s association with Zalmaqqum and Tuttul, two sites known positively to have been situated in the west (Durand 1990: 272).

Durand suggests that Dur-Addu and Dur-Shamshi-Adad may have defended an important ford or bridge over the Euphrates, and that they were situated on either side of the river (Durand 1990: 272). Unfortunately, the names of the fortresses are no longer documented in texts from later periods. One tempting clue, however, is the existence of a fortress named Dur-Sumu-Epuh. It is conceivable that it is the same site as Dur-Shamshi-Adad, having been re-named after Yamhad took possession (Durand 1990: 272). Significantly, the location of Dur-Sumu-eupuh as a place on the frontier of Yamhad giving access to the kingdom of Carchemish is known from a letter (A.3462) in which it is reported that a doctor was sent from Aleppo in order to treat an illness of Aplahanda, king of Carchemish. Apparently, the doctor arrived at Dur-Sumu-eupuh whereupon he received news that Aplahanda had recovered (Durand 1988: 582). The letter implies that Dur-Sumu-eupuh was located on the route between Aleppo and Carchemish, probably near the border with Carchemish. This would place the town on the Euphrates River. Based on this information, Durand has suggested that Dur-Sumu-eupuh and hence Dur-Shamshi-Adad, as it was formerly known, was located on the right bank of the Euphrates River, while Dur-Addu was located opposite it on the left bank, somewhere in the vicinity of Til Barsip (Tell Ahmar). Til Barsip is only a few kilometres south of Carchemish, and is known to have been a crossing place over the Euphrates in later times (Durand 1990: 272). Alternatively, Durand suggests that
one can look slightly further south in the area of Qal'at en-Nadjm, where there is an important Islamic fortress of the 13th century A.D. The fort possessed a commanding view over the Euphrates Valley and controlled a bridge across the river (Durand 1990: 274).

Besides the fortresses of Shamshi-Adad, a city named Yakaltum (Ekallatum) may have been situated in the Euphrates Valley on the frontier between Yamhad and Shamshi-Adad's empire. Relevant is a letter (A.2721) in which Shamshi-Adad demands that the city of Yakaltum be returned to a certain nomadic chief named Zimran, and that he pay his sirum-tax (a type of vassal-tribute; see Durand 1990: 58). In addition, there is the information provided in ARM 191, a letter from Shamshi-Adad upon hearing news of the death of Sumu-epuh of Yamhad (recent edition by Durand 1987: 178-80, but see also comments by Villard 1990: 572-73 and Charpin 1993: no. 32). In the letter, Yasmah-Adad is told to send instructions to the Rabbean chief Zimranum that he should cross over the river at the town of Abattum with his tribesmen (lines 18'-19'). From thence, the chief is given free reign to commit razzias against the kingdom of Yamhad, and the promise that none of the booty from these conquests will be appropriated later by the Assyrian king (lines 1"-15"). In the same letter Shamshi-Adad insists that the "country" should retreat to Ekallatum and re-assemble in that city (lines 11'-12').

Although both Durand and Villard regard this Ekallatum as Shamshi-Adad's capital city on the Tigris River (Durand 1987: 177; Villard 1990: 572-73), Charpin argues that it could refer to a second Ekallatum located on the Euphrates River. Furthermore, one may equate it with the "Yakaltum" of letter A.2721 (see above), since both are seen in connection with a Rabbean chief named Zimran (Charpin 1993: no. 32). Finally, Yuhong Wu suggests
that one should identify Ekallatum with the site of Tell Munbaqa, which during Late Bronze Age times was known as Ekalte (Wu 1992: no. 51).\(^5\) We feel reasonably comfortable about accepting this equation, despite Mayer's reservations (Mayer 1993: 104).\(^6\) Indeed, further support for a western Ekallatum is provided by a later Mari letter (ARM XXIV 152; Villard 1993: no. 120) that records the receipt of various gifts brought by Mari couriers to the palace of Zimri-Lim. Among the messengers are Mashum and Anah-ili, who carry two shekels of silver from Ekallatum and Shubat-Shamash. That these cities are mentioned together in the document as sending a joint payment of two shekels suggests that the couriers formed a single embassy arriving from the same province of Zimri-Lim’s kingdom (Villard 1993: no. 120). Since Shubat-Shamash was almost certainly located on the Balikh River (possibly Tell Abiad, as proposed by Charpin and Durand 1986: 183), one should thus look for Ekallatum in the same general vicinity. A location of Ekallatum on the Euphrates River due west of Shubat-Shamash would not be out of the question.

With the combined evidence from textual sources dating to the reign of Shamshi-Adad, the extent of his empire in the west can be postulated: the area governed by Assyrian-controlled Mari included both banks of the Euphrates River beyond Tuttul as far as Abattum. It is quite possible that the border between Assyria and Yamhad was not reached until Emar, although this can not be verified. North of Emar, Yamhad controlled all of the right bank of the Euphrates up to its border with Carchemish, except possibly for a ford which may have been in the hands of the Assyrians for a brief period of time. This ford may have been situated in the area of Tell Ahmar or Qal'at en-Nadjm, north of the principal bend in the river and not far from Carchemish territory. We believe that Shamshi-Adad’s empire included all of the left
bank of the Euphrates River north of Emar and extending up to Carchemish. An important city under Assyrian jurisdiction named Yakaltum/Ekallatum existed somewhere in this area and may be identified with the site of Tell Munbaqa.

Zimri-Lim (1775-1761 B.C.). Immediately or shortly after the death of Shamshi-Adad, around the 17th year of Hammurapi of Babylon (c. 1775 B.C.), Yahdun-Lim’s son Zimri-Lim defeated Yasmah-Adad and re-established the Lim dynasty at Mari. Presumably Zimri-Lim inherited all of the territorial possessions previously controlled by Shamshi-Adad and Yasmah-Adad. That this territory extended as far as Tuttul on the Euphrates River is well known by documents that name Zimri-Lim’s governor at Tuttul (A.2769 in Dossin 1974: 30, ARM II 137). Furthermore, there are reports of royal visits to the city (ARM II 136).

The region around Abattum probably also belonged to Mari, as it did during the reigns of Yahdun-Lim and Shamshi-Adad. Confirmation comes from the letters referring to the Rabbean Dadi-Hadun (ARM VI 73 specifically refers to him as a shaikh of the Rabbeans), who appears to be the chief of Abattum (Durand 1990: 48) and who in one letter addresses Zimri-Lim as his “king” (A.3185, Durand 1990: 48).

It would appear that good relations between Yamhad and Mari were re-established during the reign of Zimri-Lim. The texts indicate that upon the installation of Zimri-Lim at Mari, Yarim-Lim king of Yamhad sent gifts to the court at Mari (ARM XXIII 61). The close relationship between the two kings of these states is also reflected in another letter (72-39 + 27-8) in which Yarim-Lim is designated as “father” of Zimri-Lim and gives advice concerning his obligation to support Yarim-Lim in case there is an uprising in Yamhad (Klengel 1992: 234).
56 n. 68). This alliance between the two kings may have developed during the Assyrian interlude, when Zimri-Lim lived in exile at the court of Aleppo (Dossin 1983: 307-308). In addition, it would seem that Zimri-Lim depended on the support of Yamhad in his effort to gain power at Mari (Charpin and Durand 1985: 334).

With the re-establishment of good relations between Yamhad and Mari, the port city of Emar seems to have developed into a popular trading post along the Euphrates River. The city is frequently mentioned in letters and administrative documents from the palace of Mari. The texts indicate that Emar was under the jurisdiction of Yamhad at this time. For example, in the letter ARM II 134, it is reported that a party travelling from Mari had been provided with an escort of Zimri-Lim up to Emar, but from there on it was up to the Yamhad king to assume the security of the envoy (according to Durand’s interpretation of this text, 1990: 42). In another letter, (A.978) Emar is referred to as a refuge for disaffected persons and prisoners of Mari, thus intimating its location within a separate political zone (Durand 1990: 43). Still another letter reports that, while there was plenty of grain to ship to Mari from Emar, Yarim-Lim the king of Yamhad did not allow this shipment to proceed downstream, thus showing his control in this matter (A.1153, Durand 1990: 43). Finally, we learn from a letter (ARM XXV: 20) that a shipment of goods received at Emar had to be re-calculated according to an Aleppo measurement system, since it differed from the Sumero-Babylonian system currently in use by the kingdom of Mari (Durand 1990: 43).

Since Abattum belonged to Mari and Emar belonged to Yamhad, one can perhaps look for the border between the two kingdoms at a town called Alahtum somewhere along the Euphrates River between these cities (Goetze 1953: 60). The town apparently housed
considerable storage facilities and may have served as a custom house (Astour 1978: 4 and nos. 44 and 45). Of relevance is the town being described as a source of contention in a prophetic text, in which the prophets of the shrines of Adad and Halab, acting on the behalf of the king of Yamhad, insist that Zimri-Lim turn over Alahtum to Adad as his inheritance, i.e. transfer it to Yamhad (Astour 1978: 4). But Zimri-Lim, who had no intention of doing this, had his own prophets to counter the claims of the other side. One of them announced in the name of the goddess Diritum that “To Zimri-Lim Ala’itum has been given” (ARM X 9, lines 11-12). According to Astour, J. Sasson had the idea of seeing the toponym for Alahtum in the hitherto unexplained a-la-i-tum of this text (Astour 1978: 4). If we have read these records correctly, then the town of Alahtum should lie within the territory of Mari but close to the somewhat contentious border with Yamhad.

Sometime during his reign (possibly Zimri-Lim years 8 and 9), Zimri-Lim and the court of Mari made a grand tour of Upper Mesopotamia and northern Syria, including a journey through the kingdom of Yamhad and proceeding even as far as Ugarit (Sasson 1984: 246-51). In a series of letters and itineraries from Mari, it has been possible to re-construct the route that Zimri-Lim and his royal entourage took to the west. The places that are recorded in the texts after the city of Tuttul are of some relevance here, since they may refer to stops along the Euphrates River near the border between Mari and Yamhad (Villard 1986: 397). For example, after a three-days’ journey from Tuttul, Zimri-Lim arrives at a town named Hakkulan. The fact that he meets Yarim-Lim, king of Yamhad here and presents Gasher, queen of Yamhad with a special gift at the temple of Addu, suggests that Hakkulan was located somewhere along the border between Mari and Yamhad (Villard 1986: 397).
Whereas Sasson prefers to locate Hakkulan somewhere along the Balikh River (Sasson 1984: 246), other scholars such as Villard and Durand locate it along the Euphrates River, either south of Emar (Villard 1986: 395), or north of it, possibly at the site of Munbaqat since there is a known temple from this period (Steinbau 1 [?]; Durand 1990: 272 n. 8). Durand suggests that the two stops listed after Hakkulan (Yabuhum and Zalpah ša mahiratim) should also be located on the Euphrates River, at a major crossing, with the former being on the left bank and the latter on the right bank (Durand 1990: 274). Unfortunately, there is no further evidence to confirm the location of these place-names.

A final piece of information concerning the political boundary between Zimri-Lim’s kingdom and Yamhad is a letter and one of the year dates of Zimri-Lim (Dossin 1939: 49-50; Dossin 1950: 60), which describe a personal meeting between Hammurapi of Yamhad and Zimri-Lim on the territory of Yamhad. One of the points discussed was the problem of pasture land and the semi-nomadic encampments of Carchemish (Klengel 1992: 58). The fact that all three kingdoms are involved in this particular issue suggests that they all possessed territories in the vicinity of the problem area. Our reconstructed picture, which fixes Mari’s political territory as extending up the left side of the Euphrates River as far as Carchemish, and Yamhad territory opposite it on the right bank with its border with Carchemish at Dur Sumu-epuh on the Euphrates River, accords very well with this situation.

For the reign of Zimri-Lim, it is also of relevance to examine Mari’s southern frontier, namely her border with Babylonia/Eshnunna along the Euphrates River to the south. This is because there is material evidence both from Mari and from the site of Khirbet ed-Diniyeh, ancient Haradum (level 3D), which is thought to date to this period. Textual evidence
suggests that the site was under the jurisdiction of Mari during Zimri-Lim's reign. There are letters, for example, that mention the name of Haradum in the context of the activities of Zimri-Lim's generals posted at 'Ana (Hanat) (ARM XXVI/2 503). Since there are Mari officials at the city of 'Ana (also ARM X 155:3 in which the governor of 'Ana reports on the well-being of the district and ARM XI 250, which attests to a visit of Zimri-Lim at 'Ana; Anbar 1975: 11), which is located further downstream from Haradum, one can assume that Haradum was well within Mari control during this time.

One should perhaps look for the southern boundary of Zimri-Lim's empire above the city of Hit on the Euphrates River. In ARM II 77, Hit appears as the source of contention between Zimri-Lim and Hammurapi of Babylon in their conclusion of an alliance (Munn-Rankin 1956: 87). It would seem that both rulers wanted control over this city. In another letter, A.1161, Hammurapi is reported to have announced to the ambassadors of Zimri-Lim that he refused to abandon Hit among the frontier cities because of its valuable source of bitumen (Anbar 1975: 8-9). It would seem that in these negotiations, Hit was never ceded to Zimri-Lim, and remained in the hands of Babylonia.

In summary, the territory under the jurisdiction of Mari during the reign of Zimri-Lim included the land along both banks of the Euphrates River from Hit as far as the town of Alahtum, where it bordered with Yamhad. Yamhad controlled Emar at this time and probably all of the right bank of the Euphrates as far as Carchemish. It is highly possible that the kingdom of Mari included all of the left bank of the Euphrates opposite Yamhad, as had been the situation during the reigns of Yahdun-Lim and Shamshi-Adad.
Post-1761-1500 B.C. Despite Hammurapi's defeat of Zimri-Lim in 1761 B.C. and his complete destruction of Mari, it does not appear that Babylonia had any lasting control over principalities on the Euphrates River above Mari. For instance, although Hammurapi may have conquered the city of Terqa, north of Mari, the city seems to be back in the hands of the rulers of the kingdom of Khana by the reign of Hammurapi's successor, Samsu-iluna, in 1735 B.C. (Buccellati 1988: 53).

The kingdom of Khana, which effectively replaced Mari as the principal power along the Middle Euphrates after 1735 B.C, was ruled by at least eighteen kings at Terqa. According to Buccellati, Khana's kingdom during this time included the middle Euphrates basin and the lower part of the Khabur basin (Buccellati 1988: 47). Along the Khabur River, it included the city of Saggaratum and probably reached as far as the city of Qattuma, since a text of the Khana period has been found there (Buccellati 1988: 47). To the west, Khana controlled a significant portion of the Syrian steppeland, possibly including Tadmer/Palmyra and Jebel Bishri (Buccellati 1988: 47 and map in Buccellati 1990: 238, showing its territorial possession extending as far west as Qaryateyn). There is no textual evidence to suggest that Khana's influence extended to Tuttul.

To the south, Khana bordered directly on the kingdom of Babylonia. This is known from records that document a battle between Samsu-iluna, king of Babylon, and King Yadikh-Abu of Khana around 1723 B.C. (Rouault 1984: 4). The battle is thought to have been a border skirmish between the two kingdoms (Buccellati 1988: 47). The political boundary between the two kingdoms may be sought in the area just above the site of Khirbet ed-
Diniyeh, which fell under Babylonian jurisdiction during the reign of Samsu-iluna (Kepinski-Lecomte 1992: 34).

The textual evidence available for the period of the Babylonian kings does not describe the details of inter-relationships with political powers in Syria. “There are no archives, like those of Mari, that vividly portray the international scene and the main actors in it” (Buccellati 1988: 48). Indeed, in the Old Babylonian records,

... there are no references to Terqa and Khana, which implies that the spheres of action of the two regions were quite independent of each other, that Terqa’s Khana was not a satellite of Babylon. This emerges also rather convincingly from the excavations, which show practically no evidence of Babylonian presence, either in the artifactual record or in the epigraphic documents (Buccellati 1988: 48).

The end of Khana may have coincided with the Hittite raid of 1595 B.C, at which time Murshilis I marched through this region on his way to Babylon. It is clear from the archaeological record that Terqa did not survive as an urban centre past the 16th century: all indications are that the city was abandoned (Buccellati 1990: 239). Subsequently no major active urban centre is known on the entire length of the Middle Euphrates from Emar all the way down to Babylon for the next hundred years.

While the empire of Babylonia and the kingdom of Khana existed along the southern course of the Euphrates River after the fall of Mari, Yamhad continued to exist as an important power in northern Syria. Shortly after Mari’s demise, Yamhad may have annexed the lands west of the Euphrates Valley as well as the territory of the kingdom of
Already, signs that Carchemish had weakened considerably were evident in Zimri-Lim's time, for the king of Carchemish, Yatar'ami, called Zimri-Lim his "father" (Klengel 1992: 73; ARM XXVI 531). Yatar'ami also addressed Hammurapi of Yamhad as a subservient (Klengel 1992: 59; Dossin 1939: 48). We know of only one other king (Yahdul-Lim) who ruled at Carchemish after Yatar'ami (Klengel 1992: 74). His reign began in Zimri-Lim's time but may have continued after the conquest of Mari (Lafont 1988: no. 3). After that, however, no further information about Carchemish has been encountered and one can only presume that it was absorbed by another political entity, probably Yamhad.

Old Babylonian texts also testify to the existence of Yamhad. There is a letter addressed to a certain Abba'el (son of Hammurapi, the previous king of Yamhad) by king Samsu-iluna of Babylon (circa. 1730 B.C.) concerning a mission to Aleppo (AbB VII 1). There is now also an important synchronism between Abba'el, king of Yamhad and Yapah-Sumu, the first king of Khana (known from the archive of Puzurum at Terqa). A certain Yapah-Sumu-abu "UGULA Hand" is mentioned as a witness to a large scale land transaction in which Abba'el the king of Yamhad and Yarim-Lim the brother of the king (and ruler at Alalakh) also take part as witnesses (Wiseman 1953: 48; Buccellati 1988: 51).

During the reign of Abba'el, the troops of Yamhad apparently destroyed the city of Irrite in Upper Mesopotamia where there had been an uprising (Klengel 1992: 61). Later, Irrite certainly appears to be under the control of Abba'el of Yamhad, as do other towns of Upper Mesopotamia. Since Irrite is thought to have been located between Carchemish and Harran in the Balikh Valley (Hawkins 1980: 171), this would verify Yamhad's expansion into
territories previously under the dominion of Mari (Astour 1978: 4 and n. 54). Emar also belonged to Yamhad at the time of Abba’el (Klengel 1992: 61).

A weakening of Yamhad’s power in the Euphrates Region seems to have occurred during the subsequent reigns of the kings Niqmepa and Irkabtum (early 17th century B.C.). Both of these rulers experienced rebellions and defeats at certain towns thought to be located east of the Euphrates River (Klengel 1992: 62-63). Yamhad's growing weakness could be explained in connection with the emergence of a series of Hurrian principalities in northern Mesopotamia, the overlord of which was later to become king of Hurri-Mitanni (Klengel 1992: 63).

The Hittite invasion of Syria took place around the middle of the 17th century. In this connection are documents that describe the seige of Urshum by the Hittite army during the reign of Hattushili I (1650-1621 B.C.). It would appear that Urshum sought other Syrian allies, namely Aleppo and Carchemish. The Hurrians appear as confederates of Urshum or Urshum may have been subordinate to the Hurrian state of Mitanni at this time (Klengel 1992: 76). Hattushili I eventually succeeded in destroying Alalakh (Klengel 1992: 81). Aleppo is not mentioned in this connection, although regions that belonged within the sphere of Yamhad were undoubtedly touched upon by this Hittite campaign (Klengel 1992: 81).

Following Hattushili’s example, the Hittite king Murshili I (1620-1590 B.C.) also campaigned against Yamhad, and managed to secure overlordship in northeastern Syria (Klengel 1992: 77). Murshili I finally subjugated Aleppo (Klengel 1992: 82). Murshili was then able to set off on a campaign leading the Hittite army down the Euphrates as far as
Babylon (Klengel 1992: 82), where he defeated the Babylonian king Samsi-ditana (1595 B.C.), thus bringing an end to Hammurapi's dynasty.

On his return to his capital, Murshili was murdered and his empire was reduced to the neighbourhood of the Hittite capital. The Near East fell into decline or at least obscurity. There are almost no textual sources of information about the next century (1590-1500 B.C.). It would seem, owing to the prominence of the Hurrian state of Mittani in the 15th century, that the Hurrians had encroached into north Mesopotamia and Syria and had established power at this time. By the time of Tuthmosis I's campaign into Syria around 1500 B.C., the area of the Euphrates was referred to as Nahrin, meaning the river land. However, a fragmentary inscription that probably also dates to his reign included the name Maittani. This name should probably be equated with Mitanni, the Hurrian power which would rival Egypt for control of the Levant in the upcoming century (Roaf 1990: 132).

Summary of the Locations of Major Political Powers within the Syrian Euphrates Valley, based on Textual Sources. The historical survey presented above has outlined relevant textual information about the Euphrates Valley of Syria during the first half of the second millennium, particularly details about the nature and extent of the major political powers in this area, and the borders that demarcated their territories. Information of this nature is particularly abundant for the period of the reigns of Yahdun-Lim of Mari (1815-1798 B.C.), Shamshi-Adad I of Assyria (1798-1775 B.C.) and Zimri-Lim of Mari (1775-1761 B.C.), from which the greatest quantity of textual documentation has been recovered.
From the texts, it is clear that the most important political border on the Euphrates River during the period of Yahdun-Lim, Shamshi-Adad I and Zimri-Lim was between the state of Yamhad and Mari. During the reigns of all three rulers, this boundary remained essentially unchanged, being located across the Euphrates River between the city of Tuttul (Tell Bi'α) which was undisputably under Mari control, and Emar (Meskene), which may have been briefly under the control of Yahdun-Lim and Shamshi-Adad, but was usually controlled by the kings of Yamhad. To the north of this line, the Yamhad/Mari border was demarcated by the Euphrates River itself. Yamhad occupied the west or right bank, while Mari controlled the east or left bank, at least as far as the kingdom of Carchemish.

A map serves to illustrate the approximate location of the Mari/Yamhad border (fig. 31). The border is drawn below Emar but above Abattum, which is thought to have been situated near the modern town of Tabqa. The direction of the Yamhad/Mari border as it runs away from the Euphrates River into the Syrian Desert is more tentative since none of the available textual sources describe this line. We do know, however, that Yamhad's neighbour to the south was the kingdom of Qatna whose capital city (Qatna, at modern Homs) was located just below the south-westerly trajectory provided on the map; thus the boundary-line is not altogether arbitrary.

The capital city of Carchemish, the other important political entity in the Euphrates Valley, was situated on the Euphrates just south of the modern border between Turkey and Syria. On the map, the border between Carchemish and Yamhad is shown as occurring just above the site of Tell Ahmar (Til Barsip) on the opposite bank. This was the supposed location of the fortress-town of Dur Sumu-Epah. The extent of the Carchemish kingdom
Fig. 31: Map of Northern Syria showing the political principalities of Mari □, Yamhad □□ and Carchemish ■, during the period of the Amorite kings of Mari (1815-1761 B.C.)
shown on the map is extremely tentative; we only know that it was a relatively minor political power compared to Mari and Yamhad, and therefore suspect that it controlled a significantly smaller territory.

After the decline of Mari, the political landscape of the Euphrates Valley changed dramatically. Much of the area of the Upper Euphrates River, including the territory of Carchemish and the land to the east of the Euphrates over to the Balikh River, fell under the control of the kingdom of Yamhad. To the south of Yamhad, the kingdom of Khana dominated the area around Tell Ashara as far as Khirbet ed-Diniyeh, while Babylonia controlled all of the territory to the south of Khana. Presumably, this political configuration continued until about the middle of the 17th century B.C., when the campaigns of the Hittites brought about the collapse of the existing Euphrates kingdoms. Details about how the territory around the Euphrates Valley was demarcated between approximately 1620 B.C. and 1500 B.C. do not exist.

VII.3 Correlations between the Archaeological Record and the Textual Sources

The period covered by the greatest quantity of textual evidence, namely that between 1815-1761 B.C., is also documented by a substantial amount of archaeological evidence. This material record is derived principally from excavated sites characterized by MBIIA and Transitional MBIIA/MBIIB occupation. At a number of sites, the artifacts were found in direct association with contemporary inscriptional evidence, thus verifying their co-existence. Other sites without associated textual sources were effectively cross-dated using the chronological procedure presented in Chapter V.
The following is a list of the MBIIA and Transitional MBIIA/MBIIB sites/occupations dating to the period 1815-1761 B.C.:

Tell Hadidi, Area F and Early Strata of Area B
Tell Habuba Kabira, levels 17-20
Munbaqa, Steinbau 1, H5/H6
Halawa, level 2b-c
Tell Bi’a (Tuttul), Post-Phase of Palace, Hill C Temple, Hill C Grave, Hill E North, level Vb
Tell Mohasan
Tell Ashara (Terqa), Area F, levels 6 and 5
Mari, Palace of Zimri-Lim, Ishtar Temple, Area of Temples of Ishtarat and Ninni-Zaza, Area A level 2, Area E
Baghouz Cemetery
Khirbet ed-Diniyeh (Haradum), phase D

The remainder of the Euphrates sites, namely el-Qitar and Swayhat, as well as some of the remaining Middle Bronze occupation phases from Hadidi, Munbaqa, Halawa, Tell Bi’a, Tell Ashara, Mari and Khirbet ed-Diniyeh all date to a later part of the Middle Bronze Age (MBIIB). They are probably contemporary with the period of the Babylonian hegemony under the Hammurapi dynasty, the ascendency of the kingdom of Khana around Tell Ashara, and the gradual decline of Yamhad with the coming of the Hittites and the Hurrians in the north (1750-1600 B.C.). For the purposes of this study, I have elected not to concentrate my efforts on this later MBIIB period, mainly because the textual and the archaeological evidence is less abundant than the period preceding it, and chronological relationships between the later MB sites are much more tentative. More archaeological exploration of later Middle Bronze
occupation on the Euphrates River is required before an intensive inquiry into cultural developments and interaction among these later settlements can be conducted.

As outlined in the introduction to this chapter, a selected subset of the archaeological evidence from the early Middle Bronze Age (MBIIA and Transitional MBIIA/MBIIB) sites, namely the pottery, will be assessed in conjunction with the historical situation. Specifically, how does the pottery reflect the political environment implied in the texts? Can "cultures" be detected among the groups of sites and can these be related to the various political principalities that existed during this period? The method of determining this involves measuring the degree of stylistic similarity that exists among the contemporary pottery assemblages with the belief that greater similarities exist among sites that experienced greater levels of interaction. Moreover, if explicit patterning can be detected, in which similarities among a group of sites are significantly greater than similarities outside of the group, then one may posit the presence of a particular "culture" which may have some relationship to the political landscape of the time period.

Tell Hadidi was selected as a starting point for comparisons with neighbouring sites because it contained the most representative and complete sample of MBIIA rim forms. The total number of illustrated rim sherds for each of the sites was counted, followed by a tally of rim sherds that did not exhibit any good parallels in terms of size and appearance with the rim-sherds from Hadidi. This number of diverse rim elements was computed as a percentage of the total number of rims at each of the sites. So, for example, in comparing the assemblage of Hadidi and Habuba Kabira, of the 116 illustrated vessel rims from Habuba Kabira, five vessel rims, or 4% of its assemblage, diverged from the Tell Hadidi assemblage.
The following table lists the percent differences between each of the contemporary MBIIA sites and Tell Hadidi on the basis of rim sherd profiles:

<table>
<thead>
<tr>
<th>MBIIA Site</th>
<th>% Divergence from Tell Hadidi rim assemblage</th>
<th>Political Polity Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munbaqa</td>
<td>0%</td>
<td>Mari</td>
</tr>
<tr>
<td>Habuba Kabira</td>
<td>4%</td>
<td>Yamhad</td>
</tr>
<tr>
<td>Halawa</td>
<td>12%</td>
<td>Mari</td>
</tr>
<tr>
<td>Tell Bi'a</td>
<td>26%</td>
<td>Mari</td>
</tr>
<tr>
<td>Tell Mohasan</td>
<td>40%</td>
<td>Mari</td>
</tr>
<tr>
<td>Tell Ashara phase 5</td>
<td>79%</td>
<td>Mari</td>
</tr>
<tr>
<td>Tell Ashara phase 6</td>
<td>80%</td>
<td>Mari</td>
</tr>
<tr>
<td>Mari</td>
<td>82%</td>
<td>Mari</td>
</tr>
<tr>
<td>Baghouz</td>
<td>79%</td>
<td>Mari</td>
</tr>
<tr>
<td>Khirbet ed-Diniyeh</td>
<td>84%</td>
<td>Mari</td>
</tr>
</tbody>
</table>

Table 31: Percent differences between Contemporary Middle Bronze Euphrates Sites and Tell Hadidi, on the Basis of Comparisons among Rim Sherd Profiles.

Significantly, this chart shows a clear and direct relationship between the geographical distance between each of the sites and Tell Hadidi, and the degree of similarity between the rim sherd assemblages. For example, Munbaqa is geographically the closest Middle Bronze Age site to Tell Hadidi, and it has the most similar pottery assemblage, with no divergent elements at all. Habuba Kabira is the second closest site to Tell Hadidi and it has the second highest number of rim parallels. The site furthest away from Tell Hadidi, Khirbet ed-Diniyeh, has the greatest percentage of divergent forms. The results of this analysis may also be expressed in a graph (Fig. 32a), in which the percentage divergence between Tell Hadidi and other Euphrates sites' assemblages is plotted against the geographic distance between each of those sites (in kilometers, along the Euphrates River) and Tell Hadidi. The location of the
points near the central, diagonal regression line in the matrix reflects the correlation between cultural similarity and geographical distance.

The results provided by this study of the sites' pottery assemblages, therefore, do not exhibit any strong correlations with the political landscape of the early second-millennium B.C. as it is known through the textual documentation. During this period, both Tell Hadidi and Habuba Kabira belonged to the kingdom of Yamhad, while Munbaqa and Halawa were controlled by Mari. Similarly, Tell Bi’a, Tell Mohasan, Tell Ashara, Baghouz and Khirbet ed-Diniyeh were all located within Mari-held territory during the reigns of Yahdun-Lim, Shamshi-Adad I and Zimri-Lim. Given this political configuration, one might suspect that the sites within each of the political principalities would have more stylistic similarities among themselves than with sites outside of these entities. This pattern, however, is not detectable. Although Tell Hadidi has very strong ceramic affinities with Habuba Kabira, which is supposed to lie within the same political jurisdiction (Yamhad), it has an even greater number of similarities with the pottery from Munbaqa, which is thought to belong within the jurisdiction of Mari.

Further verification of the lack of obvious correlations between the sites’ ceramic cultures and the political entity to which they belonged can be sought by measuring the ceramic similarities between Tell Bi’a and other sites. Given Tell Bi’a’s certain location within the kingdom of Mari, one could suppose that its ceramic assemblage would be more closely related to other sites in the Mari region, namely Tell Ashara and Mari itself. However, an analysis of similarities between the rim assemblages of Tell Bi’a and other sites produced a different pattern, as Table 32 illustrates. Note that in this analysis, a decision was made not
to compare the Tell Bi’a rim assemblage with the MBIIA rim corpus from Tell Hadidi due to problems of uneven data sizes. I recognized that the majority of differences observed between Tell Bi’a and Tell Hadidi are due to the large number of rim sherds counted in Tell Hadidi’s MBIIA corpus as compared to the rather limited number of published sherds from Tell Bi’a. In this situation it is impossible to tell whether the differences between the two sites are the result of cultural variation, or simply that Tell Bi’a’s annual reports did not contain as many illustrations of rim types as Tell Hadidi, particularly types that may have been represented by only one or two sherds.

<table>
<thead>
<tr>
<th>MBIIA Site</th>
<th>% Divergence from Tell Bi’a rim assemblage</th>
<th>Political Polity Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munbaqa</td>
<td>33%</td>
<td>Mari</td>
</tr>
<tr>
<td>Habuba Kabira</td>
<td>20%</td>
<td>Yamhad</td>
</tr>
<tr>
<td>Halawa</td>
<td>20%</td>
<td>Mari</td>
</tr>
<tr>
<td>Mohasan</td>
<td>20%</td>
<td>Mari</td>
</tr>
<tr>
<td>Tell Ashara phase 5 phase 6</td>
<td>50% 51%</td>
<td>Mari</td>
</tr>
<tr>
<td>Mari</td>
<td>27%</td>
<td>Mari</td>
</tr>
<tr>
<td>Baghouz</td>
<td>53%</td>
<td>Mari</td>
</tr>
<tr>
<td>Khirbet ed-Diniyeh</td>
<td>50%</td>
<td>Mari</td>
</tr>
</tbody>
</table>

Table 32: Percent Differences between Contemporary Middle Bronze Euphrates Sites and Tell Bi’a, on the Basis of Comparisons among Rim Sherd Profiles

The table shows that, in terms of its pottery assemblage, Tell Bi’a’s greatest affinities are with assemblages from contemporary sites nearest to it. Thus, least divergent are the assemblages of Halawa, the nearest site to the north-west (19.68%), and Tell Mohasan, the nearest site to the south-east (20%). Note in addition that while Halawa is considered to have belonged under the authority of the same political power as Tell Bi’a, Habuba Kabira was
under the control of Yamhad. Yet Habuba Kabira's differences with Tell Bi’a are not significantly greater than those observed between Halawa and Tell Bi’a. Finally, one can note that, overall, Tell Bi’a has greater ceramic affinities with the sites of the Big Bend than with sites in the vicinity of Mari. While this certainly denies any relationship between the Tell Bi’a pottery and the site's political affiliations, it does have a clear and unquestionable relationship to geography, for the site of Tell Bi’a is in closer proximity to the “Big Bend” region of the Euphrates River than it is to the Mari-controlled sites of the south-east. Once more, a graph serves to illustrate the relationship between cultural similarity and geographical distance (by way of the Euphrates River) (Fig. 32b).

One last analysis was conducted to support the results achieved above. In this case, the strength of ceramic differences between the MBIIA assemblage of Tell Ashara, derived from Area F, level 6, and the remaining assemblages of the Euphrates Valley was assessed. Table 33 and Fig. 33 illustrate the results of the analysis, which again show a clear and unquestionable relationship between pottery affinities and distances between assemblages. In the case of Tell Ashara, the site’s closest affinities are with Tell Mohasan (13% divergence), its nearest neighbour on the Euphrates River.
Table 33: Percent Differences between Middle Bronze Euphrates Sites and Tell Ashara, Level 6 (Area F), on the Basis of Comparisons among Rim Sherd Profiles.

<table>
<thead>
<tr>
<th>MBIIA Site</th>
<th>% Divergence from Tell Ashara Level 6 Rim Assemblage</th>
<th>Political Polity Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munbaqa</td>
<td>66%</td>
<td>Mari</td>
</tr>
<tr>
<td>Habuba Kabira</td>
<td>44%</td>
<td>Yamhad</td>
</tr>
<tr>
<td>Halawa</td>
<td>48%</td>
<td>Mari</td>
</tr>
<tr>
<td>Tell Bi'a</td>
<td>31%</td>
<td>Mari</td>
</tr>
<tr>
<td>Mohasan</td>
<td>13%</td>
<td>Mari</td>
</tr>
<tr>
<td>Mari</td>
<td>28%</td>
<td>Mari</td>
</tr>
<tr>
<td>Baghouz</td>
<td>35%</td>
<td>Mari</td>
</tr>
<tr>
<td>Khirbet ed-Diniyeh</td>
<td>42%</td>
<td>Mari</td>
</tr>
</tbody>
</table>

In summary, a simple series of analyses has shown that correlations between pottery assemblages and political entities are weak. In contrast, what emerges is a pattern of ceramic similarity based on distance between centres. Two sites have similar assemblages if they are situated near to one another along the Euphrates River. The further apart they are, the greater the ceramic diversity between them. This pattern of cultural similarity seems to be closely related to a natural, open form of social interaction and exchange, in which neighbouring sites are more likely to have established forms of communication and interaction than settlements separated by broad geographical spaces.

Interestingly, the type of "nearest neighbour" interaction illustrated by the Euphrates pottery does find support in some of the textual sources, particularly those describing relations between Emar and neighbouring sites during the reign of Zimri-Lim. For example, one text describes how the Rabbean chief of Abattum and servant of Zimri-Lim was able to enlist the support of 200 Emarites to re-fortify his city at Abattum (A. 22 and M. 13096,
Fig. 32a: Plot of Euphrates Assemblages' Divergence from Hadidi, against their Distance from Hadidi

Distance in Kilometers from Tell Hadidi
M=Munbaqa, HK=Habuba Kabira, H=Halawa, TB=Tell Bi'a, TM=Tell Mohasan, TA5=Tell Ashara phase 5 (Area F), TA6=Tell Ashara phase 6 (Area F), MA=Mari, B=Baghouz, KD=Khirbet ed-Diniyeh

Fig. 32b: Plot of Euphrates Assemblages' Divergence from Tell Bi'a, against their Distance from Tell Bi'a

Distance in Kilometers from Tell Bi'a
M=Munbaqa, HK=Habuba Kabira, H=Halawa, TB=Tell Bi'a, TM=Tell Mohasan, TA5=Tell Ashara phase 5 (Area F), TA6=Tell Ashara phase 6 (Area F), MA=Mari, B=Baghouz, KD=Khirbet ed-Diniyeh
The diagram in Figure 33 illustrates the divergence of Euphrates Assemblages from Tell Ashara phase 6, plotted against their distance from Tell Ashara in kilometers. The points on the graph correspond to various sites:

- M = Munbaqa
- HK = Habuba Kabira
- H = Halawa
- TB = Tell Bi'a
- TM = Tell Mohasan
- MA = Mari
- B = Baghouz
- KD = Khirbet ed-Diniyeh

The figure shows a linear relationship between distance and percent divergence, indicating that as the distance increases, the divergence also increases.

Fig. 33: Plot of Euphrates Assemblages' Diversgence from Tell Ashara phase 6, against their Distance from Tell Ashara
This indicates a degree of amicable cooperation among neighbouring settlements, even those separated by the political boundary between Yamhad and Mari. Other letters reflect communications between the governor of Tuttul and the people of Emar in times of danger. Both cities were especially concerned with nomadic raids and incursions and occasionally warned each other of impending attacks (A. 3960, Durand 1990: 50). Finally, the religious cult of Dagan was not inhibited by the political line drawn between Mari and Yamhad, since there are references to the cult statue of Dagan making its way from Tuttul to the temple at Emar (A. 528; Durand 1990: 52-53).

How might one explain the existence of interaction despite the fact that political boundaries were drawn up and recognized? It is perhaps significant that the early Middle Bronze settlements of the Euphrates Valley comprised an essentially homogenous ethnic population, being made up of Amorite peoples, who shared a common ancestry, language, and social institutions, as well as religious beliefs and practices. Given this situation, it would be surprising not to encounter a certain degree of unrestricted social exchange among neighbouring settlements. In all likelihood this exchange existed in the form of inter-marriages, other social gatherings pertaining to family or tribal affiliations as well as religious ceremonies. In turn, these kinds of connections may have been responsible for the transmission of stylistic elements among the settlements’ cultural assemblages.

This situation on the Euphrates River stands in interesting contrast to that of the Islamic Fatimid Empire, described above, which was cited as an instance where a circumscribed distribution of pottery (Lustre-painted pottery) appears in a very clear relationship with the territorial limits of a political principality, namely the area controlled by
the Fatimids of Egypt. Significantly, a deeper investigation of this particular example reveals an intimate connection between this political entity and the Shi’a sect of Islam, to which the Fatimids of Egypt belonged. This religious movement was fiercely opposed to the Sunni faction, which controlled the competing Abbasid caliphate of Iraq and other parts of the Middle East (Mason 1996: 10). Given this situation, we suspect that the Lustre-ware pottery manufactured by the Fatimids not only communicated the political authority and riches of the caliphal court, it also sent clear messages about the court’s fundamental ideological affiliation (Mason 1996: 10). One can therefore see how this differs from the urbanized Amorite peoples of the Middle Bronze Euphrates River, who, by virtue of their common ethnic and religious traditions, would not have needed to assert their separate identities in any active or forceful way, despite belonging to separate political hegemonies.

Certainly, the other factor that must be considered is the nature of the pottery itself. The pottery has already been described as comprising mainly utilitarian vessels fulfilling basic functions in everyday life. The decoration on these vessels is minimal. Moreover, the early Middle Bronze pottery does not appear to be differentiated according to differences in status or wealth within the Euphrates society. This is reflected by the even distribution of most pottery types among an assortment of contexts at each of the sites under investigation. Given this rather passive and inconsequential role of pottery in reflecting human behavioural patterns, we suspect that its role in reflecting any form of political configuration was equally weak. Again, the Lustre-ware pottery of Fatimid Egypt provides an important contrast to this situation. In this example, the wares can be seen in close connection with the royal court, their production centres being located at Fustat, the administrative seat of Fatimid authority.
Moreover, this elite pottery was used very consciously as an expression of the wealth and prestige emanating from the Fatimid court. Thus unlike the Euphrates pottery, this Lustre-Ware played a very visible and "active" role in society, serving as a very appropriate material to express the political power and prestige of the Fatimids throughout their kingdom.

A Re-Consideration of the Distribution of Habur Ware. Because of the conclusions generated by the study of the Middle Bronze pottery here, it is worthwhile to re-assess Kramer's explanation of the distribution of Habur Ware, cited above, which suggested that this painted pottery has a close relationship with the political parameters of the Assyrian kingdom under Shamshi-Adad I (Kramer 1977: 104). Kramer's study is particularly relevant to our own investigation since its focus is the same time period (the early second millennium B.C.) and it relies on the same corpus of historical texts to elucidate the archaeological record. Moreover, Kramer's emphasis on the impact of the political environment on the distribution of Habur Ware parallels the focus of the current investigation. Despite these similarities, however, Kramer did not have the amount of evidence that was available for this investigation, made possible by the intensive archaeological exploration that has occurred in Syria over the last 20 years, as well as by an expanded number of published and interpreted textual sources.

Because of the low frequency of Habur Ware within the pottery assemblages from sites along the Euphrates River that are also dated to the period of Shamshi-Adad I, it seems unlikely that the manufacture and dissemination of Habur Ware is directly related to the political extent of the Assyrian Empire. If this were the case, one would expect to see a
higher frequency of Habur Ware sherds in the Euphrates Valley in Syria, since the greater part of this region was incorporated into Shamshi-Adad I's realm, as clearly testified by contemporary textual sources.

Indeed, it is significant that, despite the intensity of archaeological investigations since the time of Kramer's dissertation, only a few additional examples of Habur Ware have been found at excavated Middle Bronze Euphrates sites within the Mari region. Besides the Habur Ware vessels from Mari, namely the painted jar from Room 162 of the Palace (Parrot 1959: M. 1584), there is a possible Habur rim sherd from Area F, phase 5 at Terqa (Buia 1993: fig. 94:f), as well as two examples from the post-Palace pit at Tell Bi'a (Einwag 1993: Abb. 9:1-2). No Habur Ware sherds were found at Baghouz or Tell Mohasan, nor have the recent excavations of the French in Areas E and A at Mari produced any additional specimens. Finally, none of the excavators of Middle Bronze sites in the "Big Bend" region have reported the existence of Habur Ware.

The low frequency of Habur Ware in the Euphrates Valley is problematic if that pottery is to be regarded as defining the extent of Shamshi-Adad's kingdom. Indeed, Mari and the Middle Euphrates region of Syria were major constituents of the Assyrian Empire. Textual sources indicate that, during the years that the Euphrates region was occupied (1798-1775 B.C.), an enormous amount of Assyria's energy was spent consolidating it, namely through the strenuous defence of its borders against rival states such as Yamhad and Eshnunna, the establishment of diplomatic relations with neighbouring states such as Qatna and Carchemish, and the management of the flow of traded goods along the length of the river. Moreover, the sources testify that Shamshi-Adad himself strongly participated in the
administration of the Euphrates region. Letters containing his instructions or comments regarding various administrative duties were frequently relayed to his son at Mari and other provincial authorities within the region. Clearly, Shamshi-Adad was aware of the vital importance of the Euphrates River, particularly in terms of its trade connections with the regions to the north as well as the coastal regions to the west, and took considerable steps to ensure that it was carefully governed and maintained. Therefore, in light of the Euphrates' importance within the empire of Shamshi-Adad, it is difficult to accept that Habur Ware could be a material reflection of that political entity, given its virtual absence within this region.

How does one explain the few pieces of Habur Ware that have been recovered in the Euphrates Valley? It is possible that they owe their presence to trade with the Habur area. Either the Habur vessels themselves were the desired imported item, or the contents that they carried. Supporting their status as imports is the observation that the rim forms of these Habur vessels have much better affinities with pottery forms from Habur Ware type-sites such as Chagar Bazar than with forms diagnostic of the Middle Euphrates. A simple petrographical study, which determines the provenance of the vessels through an investigation of their mineral constituents, could possibly verify this hypothesis.

While Habur Ware does not seem to reflect the political extent of the Assyrian Empire, it is difficult to posit an alternative explanation for the somewhat restricted distribution of this distinctive painted ware. One suggestion is that Habur Ware owes its distribution to certain environmental and ecological factors. Kramer herself emphasizes that Habur Ware is concentrated at sites situated in the moist steppe north of the 300 mm. isohyet, in what appears to be a relatively uniform physical environment (Hamlin 1971: 301). Further
ecological and archaeological data are obviously needed to confirm that proposition. Given the number of sites in the Habur Triangle that have recently produced significant quantities of Habur Ware (Tell Hamidiya, Tell Leilan), it might also be interesting to try to isolate a site where pottery of the painted Habur style is nucleated, and to determine whether or not, as one moves away from that site, the number of similar Habur stylistic traits in other sites’ assemblages reduces in frequency. Such a pattern would concur with the pattern observed within the Euphrates region, where similarities with any one site’s assemblage were directly proportional to the geographic distance away from that site. In this Euphrates situation, it is impossible to speak of a single “culture,” characterized by a circumscribed area comprising sites possessing internal high similarity, as opposed to outer zones of greatly reduced similarity. Rather, the picture reflects a constant continuum of stylistic variation over space. Such a pattern observed among the Habur Ware sites would force one to question whether one can speak of a true, enclosed ceramic “culture”, or whether that “culture” is purely an arbitrary construct (Hodder 1982: 6).\textsuperscript{13}

VII.4 MBIIA Euphrates Trade and Peer-Polity Interaction

Until now, the fairly passive role of Middle Bronze pottery in human society has been emphasized. As studied, the pottery does not seem actively to express any significant messages about human or group identities, nor does it reflect any form of human behavior beyond that related to its utilitarian use. While this was the general rule for the Euphrates Middle Bronze pottery, there may, however, have been a few exceptions. Although the data need to be enlarged to provide verification, it is suspected that there was at least one type of
Middle Bronze Age vessel that reflected behavior relating to its participation in an inter-polity form of exchange along the Euphrates River.\textsuperscript{14}

The vessel in question is a restricted-necked jar, characterized by a flanged rim. At Tell Hadidi, this jar is designated Type C6 (see \textbf{Fig. 6:i-n} Chapter III, this study). Several examples (35 rims) were noted in the MBIIA contexts of Area F, and several more were included among the published vessels from Area B. Significantly, these Tell Hadidi specimens demonstrate a remarkable homogeneity in terms of their rim diameters (all within the 12-14 cm range), appearance, and manufacturing techniques. Because of the restricted nature of the jar's neck, as well as its non-porous fabric, it has already been suggested that the jar was used for liquid storage (see above, p.93-94).

What is particularly notable about this type of jar is that it is one of only a few vessels that can be identified at almost all of the MBIIA and Transitional MBIIA/MBIIB sites along the Euphrates River in Syria. Although there are minor variations in the shape of the body of the jar, the flanged appearance of the rim and the restricted neck of the jar rarely deviate from one site to the next (see \textit{figs. 34-35} for a selection of MBIIA and MBIIA/MBIIB jars from the Euphrates region).
Table 34 lists vessels belonging to type C6 from contemporary assemblages:

<table>
<thead>
<tr>
<th>Site, Area and/or Occupation level</th>
<th>Illustrated Examples of Type C6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell Hadidi, Area F</td>
<td>Chapter 3 (this study), Fig. 3.6: i-n</td>
</tr>
<tr>
<td></td>
<td>Dornemann 1992: fig. 3: 23 (complete), 25-30; fig. 7 (complete); fig. 16: 14-17</td>
</tr>
<tr>
<td>Tell Habuba Kabira, levels 17-20</td>
<td>Heinrich et al. 1971: Abb. 11: 25-31</td>
</tr>
<tr>
<td>Halawa, level 2b-c</td>
<td>Orthmann 1981: Taf. 47: 5-6, 10-14; Taf. 48: 23-24</td>
</tr>
<tr>
<td>Tell Bi'a, “Post-Palace” phase</td>
<td>Einwag 1993: Abb. 6: 12-18, 20</td>
</tr>
<tr>
<td>Tell Mohasan</td>
<td>Geyer and Monchambert 1987: fig. 12: 2-5</td>
</tr>
<tr>
<td>Tell Ashara, Area F phase 5</td>
<td>Buia 1993: fig. 117: f-g; 125: b</td>
</tr>
<tr>
<td></td>
<td>Buia 1993: fig. 164: I; 168: e</td>
</tr>
<tr>
<td>Tell Ashara, Area F phase 6</td>
<td>Parrot 1959: fig. 87: M. 895 (complete); pl. XXXVI: 1590 (complete)</td>
</tr>
<tr>
<td>Mari, Le Palais, Area E</td>
<td>Lebeau 1987: pl. IV: 8-16</td>
</tr>
<tr>
<td>Baghouz Cemetery</td>
<td>du Mesnil du Buisson 1948: pl. LXVIII: Z68, Z40, Z67, Z 159, Z66, Z19; pl. LXIX: Z29; pl. LXX (all); pl. LXXI (all); pl. LXII: Z168, Z273, Z180, Z 137, Z76, Z49 (all jars complete)</td>
</tr>
<tr>
<td>Khirbet ed-Diniyeh 3D</td>
<td>Kepinski-Lecomte 1992: fig. 64: 1 (complete)</td>
</tr>
<tr>
<td></td>
<td>Kepinski-Lecomte 1992: fig. 64: 3-5 (complete), 7</td>
</tr>
<tr>
<td>Khirbet ed-Diniyeh 3C</td>
<td>Kepinski-Lecomte 1992: fig. 64: 1 (complete)</td>
</tr>
</tbody>
</table>

Table 34: Illustrated Flanged-Rim Jars from MBIIA and Transitional MBIIA/MBIIIB Euphrates Sites

Illustrations of complete examples listed in the table reveal that, while the flanged rim of the vessels remained essentially unchanged throughout the Euphrates, the shape of the body of the jar varied slightly. One can compare, for example, the globular, wide-bellied appearance of the jar at Tell Hadidi, as well as at Tell Bi’a (see for example, the globular profile of the Abb. 6: 13, Einwag 1993), with the more oval bodies of the jars from the Mari region (Mari: Parrot 1959: fig. 87: M.895; Baghouz: du Mesnil du Buisson 1948: pl. LXVIII: Z68; and Khirbet ed-Diniyeh: Kepinski-Lecomte 1992: fig. 64: 5).

There are also differences in the carrying capacities of these flanged-rim jars, although these differences are not significant. In general, the Tell Hadidi jars (Dornemann 1992: figs.
Fig. 34: MBIIA Flanged Rim Jars of the Big Bend Region
Fig. 35: MBIIA Flanged Rim Jars of the Mari Region
3: 23 and 7) have carrying capacities of approximately 15 l, while the complete jars from the
Mari area cluster around 11-13 l. There also appears to be a series of smaller jars from
Baghouz (see especially jars of pl. LXX, du Mesnil du Buisson 1948),\(^{16}\) which cluster around
the 6 l range. It may be significant that this set of smaller jars is approximately one half the
size of the set of larger jars from the Mari region.

Given the overall homogeneous character of the Type C6 jars along the Euphrates
River, particularly in terms of the uniform size and appearance of the jar rims and necks from
site to site, I suggest that this vessel was involved in some form of inter-regional trade. By
virtue of its common appearance, the jar and its contents would have been instantly
recognizable to the majority of the Euphrates population, and this would have facilitated the
ease with which it was marketed and exchanged within the region. Moreover, I suggest that
the slight variations in the appearance of the jars from site to site would have served to
identify the jar’s point of origin. One can compare this phenomenon to modern marketed
objects such as wine bottles, which are instantly recognized world-wide by virtue of their
general appearance and common capacities, while slight stylistic variations in the shape of the
body or neck of individual wine bottles often serve to distinguish particular vintners or
individual wine-producing regions. A fitting analogy from ancient times involves the two-
handled ceramic amphorae of the Greek and Roman world, also used for the storage and
transportation of wine. Like modern wine bottles, different regions’ wine amphorae are
distinguished on the basis of their special shapes, colours, and peculiar stylistic features
(Grace 1979: 9). For example, it is possible to identify an amphora from Rhodes on the basis
of its peg tip (base) and creamy-coloured surface (Grace 1979: 10). In contrast, amphorae
from Knidos are red in colour and have ringed tips (Grace 1979: 9). Lesbian amphorae are dark gray in colour (Grace 1979: 22). Moreover, they are characterized by earmarks, small tails of clay executed in relief that extend below the handle on the shoulders of the vessels (Clinkenbeard 1982: 249).

The Euphrates jars' participation in some form of inter-regional exchange is supported by the discovery of a peculiar, flanged-rim jar at Mari (Parrot 1959: pl. XXXVI: M.1590 and Fig.36 here). Unlike the other flanged-rim jars reported from the Mari region, this jar has a globular rather than oval body. Unquestionably, its best parallels are with the globular, flanged-rim jars of Tell Hadidi to the northwest. Not only is the jar similar to the Hadidi examples in terms of appearance, but also in terms of its outer dimensions (Hadidi: Dornemann 1992: fig. 23:3 rim width = 12.7 cm, height = 38 cm; Mari: Parrot 1959: pl. XXXVI rim width = 13 cm, height = 36 cm). Moreover, the Mari example is characterized by two painted bands on its upper shoulder, closely paralleling the incised bands present on the Hadidi jar.17 The striking similarities suggest that the jar was in fact an import from the Big Bend region, and are consistent with its involvement in some form of long-distance exchange. In addition, the fact that jar M.1590 was found in a room in the Palace of Zimri-Lim with several other vessels, most of which were unique to the Mari region and had probably been brought in from elsewhere, supports the jar’s status as an import (Gates 1988: 81). Incidentally, the general consensus is that room 162 served as a depository for imported jars after their contents had been emptied or re-bottled in other containers.18

Textual sources from Mari report that two types of liquid commodities stored in jars (DUG = karpatu) were frequently traded up and down the Euphrates River during the period
Fig. 36: Flanged Rim Jar M.1590 from Room 162 of the Zimri-Lim Palace at Mari (from Parrot 1959: pl. XXXVI)
of the Mari archives. One of these commodities was wine. During the period of Zimri-Lim, for example, large shipments of wine (often as many as 300 jars per boat) arrived by boat from Carchemish (eg. ARM IX:17), which was purported to be a major centre of viticulture. Cargoes of wine also arrived from Aleppo and Emar (ARM IX:33; A.623+, in Durand 1990: 73). Finally, the texts report that Terqa and possibly Dur Yahdun-Lim provided the king and his royal court of Mari with jars of wine (ARM IX:101, 186-187).

It would appear that wine was also transported from Carchemish to Mari during the period of Shamshi-Adad, for there are letters in which the king of Carchemish offers and sends jars of wine and other products to Yasmah-Adad at Mari (ARM V:6 and 13). That these commodities were shipped to Mari via the Euphrates River is verified by letters such as ARM V:9, which reports that a Carchemish convoy of boats carrying 30 sheep and 50 jars of wine destined for Mari were detained at Tuttul, a major port along the river. This information is significant, for it suggests that trade and commerce continued along the Euphrates even though the stretch of the river between Tuttul and Carchemish may have been an area of political tension between Assyria and Yamhad.

Oil, in its various forms, was also produced in the northern Euphrates Valley and shipped in jars to Mari. Jars of sesame oil, for example, are reported in the Mari archives as arriving from Emar (A.3362, in Durand 1990: 73), while quantities of olive oil were brought to Mari from Carchemish and Aleppo (ARM VII:238; IX:268).

Given this textual evidence, which reports an active trade in both wine and oil during the period of the Mari Archives, it is possible that the flanged-rim, liquid jar served as a container for one of these commodities. It is certainly suggestive that the standard capacity
for a jar of wine (*karpatu*) was approximately 10 litres (=10 *qa*) (Gates 1988: 71; Finet 1974/1977: 129). The majority of Type C6 vessels whose capacities were calculated in this study would have been able to contain this volume of liquid. Further support for the identification of type C6 as a wine jar are the Baghouz tombs, where flanged-rim jars were often set beside wooden tables set with a funerary meal (du Mesnil du Buisson 1948: see tombs Z122 and 123, p. 75). In all likelihood, these jars were containers for a beverage, probably wine. Finally, there is the flanged-rim jar’s association with Room 162 of the Palace of Zimri-Lim. The fact that many of the other jars found within this room are purported to have come from regions also known to have produced and shipped wine to Mari (namely the Habur Valley and Qatna; Gates 1988: 71-72), strongly suggests that the flanged-rim vessel was a wine jar.

Thus, while the present evidence is not conclusive, it does suggest that the flanged-rim jars of Type C6 were used as oil or wine containers, with wine the more likely of the two candidates. As was discussed above, the jars form a reasonably homogenous group throughout the Euphrates Valley. Their standardized appearance implies that they were intended for and used in some form of intra-riverine trade and exchange. The function of the jars and hence the commodity that they contained would have been instantly recognized by a wide audience, and this would have facilitated the marketing and selling of the commodity to consumers within the Euphrates Valley and beyond.

**Peer-Polity Interaction.** While the homogeneous character and widespread distribution of the Middle Bronze “wine” jars does not concur with a model that proposes
material cultural differentiation based on political territorial entities, it fits well within the model of "Peer-Polity Interaction."

Peer-Polity Interaction was first described by Colin Renfrew and John Cherry (1986). It is said to occur among autonomous states sharing a number of common features. These usually include:

- closely similar political institutions,
- a common system of weights and measures,
- the same system of writing (if any),
- essentially the same structure of religious beliefs (albeit with local variations, such as a special patron deity),
- the same spoken language,
- and indeed generally what the archaeologist would call the same "culture," in whatever sense he might choose to use that term.

The individual political units — the states — are often fiercely independent and competitive (Renfrew 1986: 2).

In addition, the independent states exhibiting the features above are roughly politically equal, i.e., none of the individual states can claim hegemony or political domination over any of the other principalities.

Under these conditions, it is argued that, when a significant organizational change occurs within one polity, the other "peer" polities within the region will undergo the same transformation at about the same time (Renfrew 1986: 7). Accompanying this transformation may be the appearance at each of the polities of similar institutional features. These may include the appearance of architectural features such as monumental buildings, conceptual systems for communicating information such as writing, as well as parallel customs and ritual practices reflecting and perhaps reinforcing the social organisation (Renfrew 1986: 7-8).
In other words, Peer-Polity Interaction is a competitive form of interaction and exchange between autonomous, politically equal states, resulting in a regional landscape characterized by shared and imitated cultural features. Basically, it is the effort on the part of each polity to "keep up with the Jones’s." None of these polities exists in isolation, and certain transformations cannot be explained as the result of internal processes, nor are they responses to a single outside stimulus. Rather, the transformations are the result of continuous interaction among the polities, usually in the form of competition, the transmission of innovation, and increased flow in the exchange of goods (Renfrew 1986: 8).

The concept of Peer-Polity Interaction seems highly applicable to the political environment of the Euphrates Valley in the second millennium B.C., judging by the information provided by the textual sources. The period is characterized by a number of essentially equal political kingdoms, namely Mari, Yamhad and Carchemish. Although autonomous, these states were bound by the same ethnic/cultural traditions. The polities comprised a population of Amorites, who spoke and wrote the same language (Akkadian), and shared the same religious beliefs as well as a multitude of social customs and observances. Moreover, there was a high level of interaction among these states. This interaction took the form of diplomatic alliances and treaties between kingdoms. Letters of correspondence between royal houses, in which the same language of protocol and diplomacy was used, can be clearly seen as a manifestation of Peer-Polity behavior. Interaction among the states also involved the flow of goods. The textual sources indicate that, despite the existence of separate political entities and territorial boundaries, trade and commercial exchange were carried out with few interruptions or restrictions. All matter of commodities were exchanged
along the Euphrates River, including wine, oil, grain, textiles, metals, millstones, bitumen and other products.

Several features of the archaeological record also reflect the operation of Peer-Polity Interaction. Most notable is the presence of similar, monumental religious architecture throughout the Euphrates Valley. For example, long-roomed temples characterized by thick, mudbrick walls, a single cella, and a portico defined by antae, have been discovered in early Middle Bronze Age levels at Tell Bi‘a (Hill C Temple: Strommenger et al. 1986: 30, Abb. 16), Mari (Dagan Temple: Margueron 1985: 496) and Munbaqa (Steinbau 1, H6-H5: Heinrich et al. 1974: 19, Abb. 35). One can postulate that this form of monumental temple originated in one of the Syrian polities, and that it was consequently adopted and imitated shortly after by the other competing principalities, possibly in an effort to assert their claim to the patronage of a particular deity. Long-roomed temples of essentially the same plan have also been identified at other Middle Bronze Age sites in Syria and Palestine. These include, for example, Temple D at Ebla (Mardikh IIIA-B; Matthiae 1977: 131, fig. 30), possibly Qatna (Mishrife), as well as Hazor in Palestine (Area A temple at Hazor: Yadin 1972: 103, fig. 26). While being situated outside of the Euphrates Valley, these sites probably also lay within the region in which Peer-Polity Interaction was operating. Ebla was probably controlled by Yamhad at this time, for instance, while textual sources verify that both Qatna and Hazor had frequent trade and diplomatic connections with the court at Mari (Dalley 1984: 45, 153 and 172).

Other artifacts within the archaeological record testify to the operation of Peer-Polity Interaction among neighboring political entities within the Euphrates Valley. For example,
there is the evidence of a Middle Bronze clay plaque from Tell Hadidi (Domemann 1992: fig. 21). Domemann has noted that the plaque bears the representation of a ceremonial scene that has many stylistic features in common with the famous Investiture scene from Room 106 of the palace of Zimri-Lim at Mari (Parrot 1958: pl. XI). The stance of the figures in the Mari scene, their robes, hats, and beards, all exhibit strong parallels with the Hadidi scene (Domemann 1992: 85-86). To be sure, the ritual scene on the Hadidi plaque, which depicts two opposing figures drinking beer out of a jar, differs from the subject-matter of the Mari mural. However, other artifacts from Mari, namely clay plaques, illustrate this same beer ritual (Parrot 1959: fig. 58 and pl. XXIX:1506). In summary, the evidence not only provides an example of the emulation of artistic style associated with religious or ritual ceremonies among different polities, but also a duplication of the rituals themselves. This behavior as manifested in the archaeological record, would certainly concur with the model of Peer-Polity Interaction described above.

Finally, we may return to the flanged-rim “wine” jars. It is possible to explain their homogeneous character in light of Peer-Polity Interaction. The jars reflect the operation of the flow of goods and commodities, and I argue that their similar appearance throughout the Euphrates Valley was the result of the process of emulation among competing states. These states, in their desire to succeed in the commercial market for wine or oil along the river, maintained a competitive edge by replicating the style and appearance of the jars of their neighboring rivals.

The fact that this process of emulation did not exist among all pottery types within the Euphrates Valley can be answered simply: imitation of pottery styles only existed among
vessels connected with the operation of trade and exchange between neighboring polities. These pots would have been highly visible to a wide audience and the strength with which they competed in a large regional market would have depended on the ease with which they were identified within this market. In contrast, the majority of vessels within a settlement’s assemblage were not intended for use beyond the site where they were manufactured. They would not have been visible to a large or diverse population. One can expect that these kinds of vessels were produced according to the particular tastes of the local population for whom they were intended. While there would have been a certain degree of stylistic imitation among neighboring communities, stylistic emulation on a regional scale would not have existed.

**Summary.** In summary, the evidence suggests that “Peer-Polity Interaction,” as defined by Renfrew, may have been operating within the Euphrates Valley in the Middle Bronze Age. With this model, one should not expect to see highly differentiated material cultures within each of the individual political polities within the region. On the contrary, the region is characterized by a relatively homogeneous material cultural tradition because of the process of emulation among competing polities. The operation of Peer-Polity Interaction is reflected in various aspects of the MBIIA and MBIIA/MBIIB Euphrates material record, including a particular type of ceramic jar, which, by virtue of its common appearance throughout the region, is seen as the product of competitive emulation among neighboring polities. With the exception of this jar and possibly a few other types, however, the majority of pottery vessels from contemporary Middle Bronze sites within the region do not appear to exhibit this behavior. Rather, ceramic similarities among the sites can be explained by the
transmission and diffusion of stylistic information on a very local level, with neighboring settlements demonstrating the highest form of material cultural interaction and imitation.

These findings provide some important conclusions about the study of relationships between archaeological evidence and human behavior. Not all artifacts reflect or express aspects of human identity and interaction to the same degree. Moreover, even within certain classes of artifacts such as pottery, there can be enormous variation in the ways and degrees to which particular vessel types reflect and communicate social behavior. In the case of the Euphrates MBIIA pottery, this is clearly illustrated by the differences between the stylistic features of the majority of vessel types, which simply reflect the local function for which they were intended, and the wine/oil jars, whose particular appearance communicates information about regional trade and exchange. In order to understand fully these messages and ultimately, the role of material culture in the expression of human culture and behavior, one must be prepared to examine each artifact individually, assessing its function, the context in which it was found and the degree to which it reflects involvement in activities on a local or regional level.

CHAPTER VII ENDNOTES

1. The series of year-names for Yahdun-Lim is incomplete and, consequently, it is difficult to know the precise year when he ascended the throne at Mari (Veenhof 1985: 207 n. 56). Veenhof has fixed the beginning of Yahdun-Lim's reign around 1815 B.C., while Durand dates it earlier, around 1820 B.C. (Durand 1985: 160).

2. The absolute chronology for the rulers of Mari during the period covered by the archive is still the subject of considerable dialogue among Assyriologists and has yet to be resolved. The chronology depends on eponym lists, king lists, chronicles and synchronisms within letters from a variety of Mesopotamian sites. Particularly
problematic are the total number of years of Shamshi-Adad's reign and the number of years he controlled Mari (see Whiting 1990: 175-76, for a recent discussion of this problem). Furthermore, after Shamshi-Adad's death, did Yasmah-Adad continue to rule at Mari for several years before Zimri-Lim assumed control of the city?

It is not my intention to enter into a discussion of every chronological problem of the period. Rather, for simplicity's sake and to avoid confusion, I have adopted Veenhof's absolute chronology (1985: 215), largely because it incorporates the most recent chronological findings and does not deviate greatly from previously proposed dates. The following dates as they pertain to the rule at Mari during the period of the archives are as follows (according to the Middle Chronology):

1815 B.C.  Approximately the beginning of reign of Yahdun-Lim at Mari; Beginning of the reign of Shamshi-Adad in Assyria, with his conquest of Ekallatum
1801 B.C.  Yahdun-Lim dies; Sumujamam, his brother, begins his rule at Mari
1798 B.C.  Shamshi-Adad conquers Mari and installs his son, Yasmah-Adad, as vice-regent
1780 B.C.  Death of Shamshi-Adad; Yasmah-Adad continues to rule at Mari
1775 B.C.  Yasmah-Adad loses the throne of Mari to Zimri-Lim
1761 B.C.  Hammurapi conquers Mari and Zimri-Lim disappears
1750 B.C.  Hammurapi is succeeded by his son Samsu-iluna

3. Despite this convincing support for Abattum's location on the right bank, Durand prefers to situate Abattum on the left bank of the Euphrates River. His argument is based on information provided by letters from the time of Zimri-Lim that refer to a certain person named Dadi-Hadun. It would appear that Dadi-Hadun lived at Abattum and may have been the Rabbean prince or chief of that town (Durand 1990: 48). For example, Dadi-Hadun is seen organizing a force of Emarites to help to fortify Abattum (A.22 and M.13096, Durand 1990: 46). In another letter, someone describes Abattum as Dadi-Hadun's place of residence (A.987, Durand 1990: 46). Particularly significant to Durand is a letter sent to Zimri-Lim (A.3185), presumably from Dadi-Hadun himself, that reports that, while the chief was in Aleppo, Aplahanda, the king of Carchemish sent him a message inquiring about the disposition of the nomadic Benjaminites in his (Dadi-Hadun's) territory. It would seem that Aplahanda was particularly concerned about the situation on the left bank of the Euphrates. Durand thus argues that Dadi-Hadun could only report on the activities of the left bank of the river if his territory, and consequently Abattum, were located there (Durand 1990: 48). He suggests that the town might be found in the vicinity of Qala'at Jabbar, approximately halfway between Tuttul and Emar and opposite the site of Siffin (Durand 1987: 161). In her study of geographical place names, Gröneberg follows suit, placing Abattum in the neighbourhood of Taqba, also on the left bank of the Euphrates River (Gröneberg 1980: 1).

Charpin is not convinced by this reasoning (Charpin 1993: 26, no. 32). He argues that Abattum must be situated on the right bank of the river in conformance with Shamshi-Adad's letter describing it as a point of departure for the steppe. However, because the town was
sited at an important Euphrates crossing (as evidenced by ARM 1:91), the ruler of Abbatum may have controlled both sides of the river at this particular juncture. This would account for Dadi-Hadun's knowledge of the comings and goings of nomadic tribes on the left bank. In my opinion, Charpin's argument is the most convincing.

4. The newly collated "Mari Eponym Chronicle" contains a reference to Yahdun-Lim, in which it is reported that he was defeated, together with a coalition of twelve kings, by Shamshi-Adad (Birot 1985: 225 and 231: S 24-23). It is not known when this event occurred because of the fragmentary state of the Chronicle, but it is possible that it is tied to Yahdun-Lim's demise and death.

5. The name Yakaltum may also appear in a letter (ARM IV 6) concerning instructions for the governor of Tutul, who is told to send boats to ferry the Rabbeans from the Yamhadian to the Mariote bank of the river. While Charpin and Yuhong restore Yakaltum (ia-k[u-ar]-tim.KI) (line 21) as the place where the boats are supposed to be sent (after Durand's collation, see Charpin 1993: no. 32), others have restored (ia-b[u-ar]-

6. Mayer's objections to identifying the city of Yakaltum/Ekallatum with Tell Munbaqa/Ekalte have to do with that city's association with the Rabbeans in the texts. Although the Rabbeans' homeland and pastures were located in the Euphrates Valley during Yahdun-Lim's reign, there is no evidence that this continued to be their homeland in Shamshi-Adad's time. Mayer argues that the semi-nomadic tribes were continually on the move, and that their main pasturrlands frequently altered. He argues that one should consider the Balikh River as the western border of Mari at this time, and that the activities described in ARM I 95 should take place in that region (Mayer 1993: 104).

7. Recent evidence suggests that Yahdun-Lim was not Zimri-Lim's real father (see Charpin and Durand 1985: 337-38).

8. The precise order of events and dates for the death of Shamshi-Adad and the defeat of Yasmah-Adad by Zimri-Lim is still under discussion. While some scholars place a very short time interval between Shamshi-Adad and the accession of Zimri-Lim, still others see a five-year term in which Yasmah-Adad continued to reign at Mari before he was finally defeated in battle by Zimri-Lim (Whiting 1990: 175-178; Charpin and Durand 1985: 319-322). In any event, it is not clear how Shamshi-Adad died; there is no evidence that his death is connected to the war with Yamhad (contra Klengel 1992: 55).
9. The city is listed in the Urbana itinerary as occurring before Abattum and Tuttul and presumably after Emar, although this city’s name occurs in a broken place in the tablet.

10. Texts from Tell Leilan suggest that Yamhad’s influence may have extended as far as the Habur area (Eidem 1987: no. 123b).

11. While Shi’a and Sunni factions of Islam originated after the death of Mohammed in response to disagreements over family succession, they soon also developed into two opposing religious ideologies within Islam.

12. For example, parallels to the painted cup from Tell Bi’a are best found at Chagar Bazar (Mallowan 1937: Abb. 21:1); while the Mari vessel from Room 162 of the Palace parallels jars found at Chagar Bazar (Mallowan 1937: Abb. 21:9-10).

13. It is interesting that the pottery assemblage from phase VII of the site of Hammam et-Turkman, which also dates to the early part of the Middle Bronze Age, comprises at least seven examples of Habur painted vessels (Curvers 1990: 129). Hammam et-Turkman is located on the Balikh Valley, closer to the centre of the Habur Ware culture area of north-eastern Syria than Mari and Tell Bi’a. Like the Euphrates sites, the infrequent presence of Habur Ware at this site indicates that it was not within the Habur “cultural” area; however, its closer geographical distance to the Habur Valley may account for the higher number of Habur painted sherds found here.

14. Marie-Henriette Gates’ (1988) discussion of the presence of trade and exchange in Bronze Age Syria provided the fundamental starting-point for this study. In her work, she examined a unique form of vessel (a lentoid flask) found in the Euphrates Valley and posited its function as an imported jar from the west based on complementary textual evidence, ceramic parallels and archaeological context (Gates 1988: 69-73). While one may now call into question the status of the vessel as an import from the west, given its abundant distribution throughout the Euphrates Valley (see list of locations, next paragraph), Gate’s observation that the jar was involved in some aspect of exchange was considered highly intriguing, as was her effort to use all relevant historical and archaeological data to reconstruct its identity and function. While the lentoid flask is not the subject of this investigation, another jar, not unlike it in terms of its appearance and distribution, is. I have conducted an investigation similar to that of Gates, with some additional insights provided by recent evidence and a new understanding of the Syrian Middle Bronze pottery repertoire. Moreover, this investigation has attempted to provide a deeper explanation of the vessel’s role within the context of the political/economic environment of the Euphrates Valley.

   Lentoid flasks: They have now been discovered at MBIIA and MBIIB contexts at el-Qitar (McClellan 1986: fig. 8:10-15), Tell Hadidi (Type C25, Chapter III in this study), Habuba Kabira (Heinrich et al. 1971: Abb. 11:18), Tell Bi’a (Einwag 1993: Abb. 7:1-2), Tell Ashara (Buia 1993: figs. 120:b, 173), Mari (Parrot 1959: M.857), Baghouz (du Mesnil du Buisson 1948: pl. LXXVIII: Z203), Khirbet ed-Diniyeh (Kepinski-Lecomte 1992: fig. 76: 1-
11), and Euphrates sites between Tabqa and Halabiye that have been surveyed by the Germans (Kohlmeyer 1986: 55-57).

15. The capacities for published complete jars were calculated using the method described in Rice 1987: 220-21. In this method, the interior of the vessel is divided horizontally into a series of stacked cylindrical slices, whose individual volumes are calculated \((v=r^2\pi h)\). The total volume of the vessel is the sum of these slices. It is notable that Gates' estimate for the volume of the Mari Jar M.1590 (Parrot 1959: pl. XXXVI) at 11.83±0.93 l, using the system set out by Ericson and Stickel (Gates 1988: 72 and n. 8), did not greatly differ from my own estimate for this vessel, at 12.3±1.1.

16. Du Mesnil du Buisson did not supply a scale with any of his published Baghouz pottery drawings. Fortunately, I was able to draw and record several Baghouz vessels that are currently housed in the Aleppo Museum in Syria. Through this work, I was able to determine that the illustrated pots were published roughly at a scale of 1: 5.5.

17. The painted bands on this jar prompted Parrot to identify the jar as Habur Ware (Parrot 1959: 133-34). In terms of its form and stylistic appearance, however, this jar does not resemble Habur Ware at all.

18. Marie-Henriette Gates has provided a detailed discussion of the foreign character of the jars of room 162. She notes the appearance of Habur Ware jars (M.1584, M.1585, M.1590bis and M.1590 [although I consider M.1584 to be the only true Habur vessel]; Gates 1988: 72), ovoid pitchers with strap handles and trilobate spouts whose best affinities are with coastal Syria-Palestine (Gates 1988: 72) as well as lentoid flasks, which are also thought to originate in the Levant (Gates 1988: 71).

19. Complicating the issue, however, is the fact that the standard capacity for a jar of oil was probably also 10 l (Burke 1964: 74; Gates 1988: 87 n. 38).

20. I am grateful to Diane Flores, who gave me a copy of her 1995 graduate seminar paper for NES 1406 (Near Eastern Studies, University of Toronto), which provides a useful synthesis of all Antentempels and Migdol Temples in Mesopotamia, Syria and Palestine.
CHAPTER VIII

SUMMARY

The chief purpose of this study was to formulate a ceramic Middle Bronze Age chronology that could be used to determine the relative dates of archaeological sites in the Euphrates Valley of Syria. Based on the Middle Bronze ceramic repertoire from Tell Hadidi, I isolated diagnostic pottery categories that are thought to represent successive phases of the Middle Bronze Age. I then reviewed the current ceramic evidence from excavated sites along the river and attempted to fix those sites’ occupations within the newly defined phases of the Middle Bronze Age on the basis of the presence or absence of these diagnostic ceramic features. This study successfully determined the relative placement of the majority of ancient settlements within distinct phases of the Middle Bronze Age, i.e., MBIIA (Cooper), Transitional MBIIA/MBIIB (Cooper) and MBIIB (Cooper).

The formulation of the Middle Bronze Euphrates chronology made it possible to study two important issues. First it was possible to clarify the Euphrates Valley’s chronological position relative to the Levant, based on a re-evaluation of the Levantine material evidence and its correlation with the newly structured Euphrates sequence. Second, the chronology facilitated an investigation of cultural relationships between contemporary Euphrates sites. This inquiry has led to some new insights about riverine interaction, particularly that involving political and economic exchange.

While this study has established a useful chronology and has generated important statements about cultural exchange and interaction, it has been constrained by certain factors.
The greatest hindrance has been the deficiencies encountered in the published record. Although access to a significant quantity of stratified pottery from Tell Hadidi has facilitated observations of certain changes and developments in the Middle Bronze pottery sequence, it was often difficult to make the same kinds of observations at other sites because of the low quantity of published illustrations of comparable pottery. In some cases, less than ten published sherds represented the entire Middle Bronze occupation at a site (i.e., Tell es-Sweyhat). Moreover, several of the published reports provided little or no other details about the vessels beyond simple observations about the appearance and size of the vessels' rim profiles. Because of these limitations, the cross-dating procedure conducted in this study employed only simple measurements of similarity. Correlations between pottery assemblages and the consequent determination of relative dates were based almost entirely on similarities observed among rim sizes and general forming features. Furthermore, the lack of frequency data from the majority of Middle Bronze Age sites necessitated correlations based on presence or absence of observations, resulting in the detection of only major Middle Bronze phase distinctions among the sites' assemblages. More quantified pottery would probably have enabled the detection of subtler developments within the Middle Bronze Age ceramic sequence, resulting in a more sharply-tuned relative chronology than that achieved here. Indeed, the frequency data for Area F at Tell Ashara/Terqa (Buia 1993) and Khirbet ed-Diniyeh/Haradum (Kepinski-Lecomte 1991), which helped to determine persuasively the sites' temporal position relative to the site of Mari, demonstrated the effectiveness of this type of information when it was available.
Both the chronological study and the ensuing investigation of inter-site relationships and interaction have relied almost entirely on a single kind of artifact: pottery. This is because pottery was encountered in abundance during excavations and consequently was the most frequently documented artifact within the published excavation reports. Furthermore, pottery was found to suit an investigation of chronology because of its sensitivity to change through time. Pottery successfully assisted in the detection of chronological developments and helped in the determination of relative dates for the Euphrates sites' occupations.

Although pottery's advantages with regard to chronology building are evident, its application in investigations of inter-site interaction is less apparent. Analyses revealed that Euphrates pottery played a predominantly passive role during the Middle Bronze Age. The majority of vessels within the sites' assemblages, with the exception of the special "wine" vessels, did not reflect any form of human behaviour beyond their utilitarian use and simple site-to-site interaction and exchange. For the study of supra-local interaction, therefore, pottery was not a particularly successful tool. In my discussion, however, I briefly introduced other evidence in the form of plaques depicting ritual activities and "long-roomed" temples, which were thought to reflect the operation of Peer-Polity Interaction among the political principalities of the Euphrates Valley. These examples demonstrated the potential of other artifacts besides pottery in the determination of particular modes of Euphrates River interaction. Clearly future research would benefit significantly from investigations of these aspects of the material culture of the Euphrates Valley, provided sufficient data were available.1
Despite its limitations, this dissertation has made several important contributions to the study of the Middle Bronze Age of the Euphrates Valley. For one, it has presented the hitherto unpublished pottery assemblage from Area F at Tell Hadidi. A typology was formulated and illustrations were provided for each of the vessel categories encountered within that assemblage. Large, krater-like vessels with ribbed rims were particularly prolific in the Area F assemblage; consequently, a large number of these were discussed and illustrated, compensating for the minimal documentation of such vessels among other contemporary assemblages. These new data may be of use in future studies, not only in analyses of chronology but in other types of investigations which require quantities and comprehensive presentations of ceramic collections.

Importantly, this study was the first of its kind to attempt a systematic investigation of the chronology of the Middle Bronze Age of the Euphrates Valley. All of the relevant available evidence from excavated second-millennium B.C. sites was compiled and described. Following this, the pottery from these contexts was arranged into a Middle Bronze sequence that was divided into successive phases. In the past, either excavators gave no consideration as to how the Middle Bronze Age should be sub-divided, or else efforts to clarify the Middle Bronze Age Euphrates sequence were based on somewhat impressionistic observations about the development of pottery forms through time. In contrast, this study has tried to isolate distinctive pottery traits that best characterize each of the phases, and which in turn may be used to cross-date other assemblages within the Euphrates Valley. One may note in particular the isolation of ten diagnostic vessel types which marked the MBIIA phase of the period, and their reasonably successful application in determining the relative dates of both “Big Bend”
and Mari region assemblages. Also noteworthy was the detection of a distinctive flared-rim goblet (Type C99), whose appearance, in association with other notable ceramic developments formed the fundamental dividing point between the MBIIA and MBIIB periods.

Lastly, the dissertation has demonstrated the utility of integrating the data provided by the artifactual record with information furnished by the textual sources. Clearly the Euphrates Valley of the early second millennium B.C. is an ideal place to exploit the complementarity of these two types of evidence, for both are abundant and both frequently derive from the same archaeological contexts. One may recall that it was possible to confirm the close temporal relationship between pottery assemblages from different occupational contexts because contemporary textual documents were also associated with these contexts. Documents excavated in Tell Bi’a’s “Post-Palace,” for example, were dated to the same period as texts found in the shakanaku Palace of Area A at Mari and phase 6 of Area F at Tell Ashara/Terqa. Consequently the pottery associated with these contexts could also be considered contemporaneous.

A combined study of the archaeological and textual record also generated important conclusions about inter-site interaction and cultural exchange within the Euphrates Valley. The presence of long-distance trade, which was proposed on the basis of the observation that a distinctive flanged-rim jar was repeated throughout the Euphrates region, was substantiated when textual sources reported that a brisk trade of wine, which was transported in clay jars, existed among the Euphrates sites. Moreover, that a form of Peer-Polity Interaction existed at this time was further corroborated by the textual sources, which clarified the competitive
but interdependent relationship operating among the separate political principalities within the region.

In summary, while further publication and increased availability of archaeological evidence from the Euphrates sites will facilitate future research on the chronology of the Euphrates Valley region and on forms of inter-site relationships and cultural exchange, this dissertation provides important groundwork in these areas of inquiry. Moreover, it is hoped that this study has underlined the advantages of examining occupational data, artifacts and textual sources in combination with one another, and has illustrated the success with which this integrated evidence can generate new and useful conclusions about the Euphrates Valley of Greater Mesopotamia during an important period of state development and international contacts.

CHAPTER VIII ENDNOTES

1. Although not discussed, it is clear that other types of evidence do indeed indicate some form of inter-site interaction. They include, for example, the presence of comparable house-plans of a distinctive configuration known as the “Hofhaus” plan, which were associated with MBIIIB contexts at Halawa and Tell Bi’a (Orthmann 1981:18; Strommenger et al. 1982: 87-93). Similar palatial-style buildings occurred at Tell Bi’a (Hill E Palace) and Mari (Shakanaku Palace of Area A), as did distinctive two-chambered tombs, which were encountered beneath the floors of these important buildings. These architectural entities are suggestive of a special form of religious and elite exchange on the Euphrates River. Further inquiries into these types of artifacts will probably furnish some interesting new insights regarding the nature and extent of Middle Bronze inter-relationships and cultural exchange.
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