UNIVERSITY OF CALIFORNIA

Los Angeles

Ritualization of Settlement:

Conditioning Factors of Spatial Congruity and Temporal Continuity

during the Late Neolithic of Southeastern Anatolia

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in

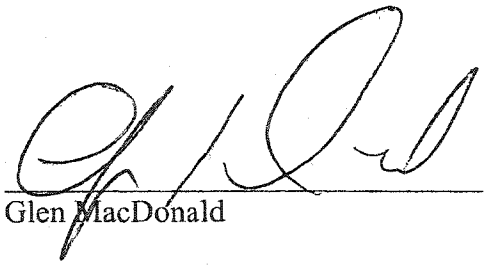
Archaeology

by

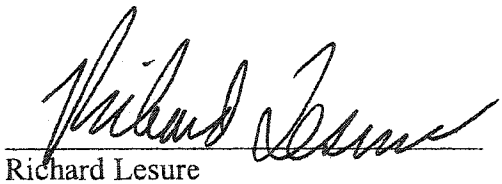
Çiğdem Atakuman Eissenstat

2004

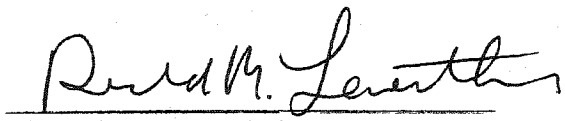
The dissertation of Çiğdem Atakuman Eissenstat is approved.



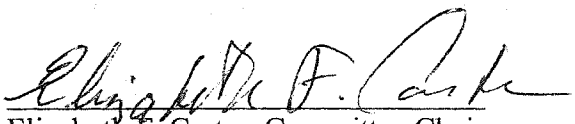
Glen MacDonald



Richard Lesure



Richard M. Leventhal



Elizabeth F. Carter, Committee Chair

University of California, Los Angeles
2004

For Yasemin and Gül

TABLE OF CONTENTS Page

APPENDICES

List of Tables

List of Figures

ACKNOWLEDGEMENTS

I must thank all my committee members for carrying the burden of academic advising. In particular, I am grateful to Elizabeth Carter of UCLA's Near Eastern Languages and Cultures Department for introducing me to the Kahramanmaraş Archaeological Project and for providing me with numerous opportunities to carry out my own research, both in Turkey and in the United States. Dr. Richard Lesure of UCLA's Anthropology Department carefully read the manuscript when it wasn't at a coherent stage and helped me focus on the methodological problems as well as the intellectual ones. He has always welcomed discussion of unformed ideas and tirelessly listened to my musings on the nature of social change in prehistory. Dr. Glen MacDonald of UCLA's Geography Department is one of the best academics both intellectually and socially. His unwavering enthusiasm and support for my research was most appreciated, as such support can be difficult to find when it is really needed. Although not a committee member, Dr. Sarah Morris of the Classics Department and the Chair of the Archaeology Program at UCLA, has been intensely involved in the writing process of the dissertation. She must have read at least five different versions of the manuscript, each with the same detail and insight. Various sections of the dissertation owes to Sarah's tremendous knowledge of a vast body of archaeological literature.

However, this dissertation owes to two people: Dr. Stuart Campbell and Dr. Richard Leventhal.

As the co-director of the Kahramanmaraş Archaeological Project, Stuart has virtually supervised my dissertation. Stuart was the person who shaped my role in the

larger UCLA-Manchester University Project in Kahramanmaraş. In the field, he provided help with ceramics analysis, shared the results of Domuztepe's surface collection as well as the recently discovered burial context, the so called "Death Pit". As a single person field team, he taught me how to conduct archeological research; as my closest research mentor, he provided opportunities for me to research in Manchester and in Turkey while he helped prepare almost all of the graphics included in the manuscript. I am honored to say that Stuart has also become one of my best friends. Over extended coffee breaks in Turkey, Manchester and the United States, I hopelessly tried to extract his knowledge of Domuztepe and the prehistoric Mesopotamia through endless questions. At this point, I cannot tell which idea is his and which idea is mine but I can tell at which coffee break it was formed.

I am also honored to say that Dr. Richard Leventhal, the President of the School of American Research, has been the most influential person in the formation of the superstructure of my archaeological thinking. Richard Leventhal could immediately recognize good ideas, even in the haystack of my thoughts, and steer in the most productive direction to flourish them. His work and teaching introduced me to the puzzle of interpretation as a dialogue between the present and the past within which the archaeologists are located as agents of change today. Through this understanding, Richard Leventhal contributed to my vision of archaeological research and public responsibility at a level that may take a lifetime to express.

There were a number of individuals who have shown genuine interest in my work at various stages. Specifically, I should mention Dr. Ernestine Elster, Dr. Jim Sackett and

Dr. Steven LeBlanc. Helle Girey, the graduate advisor of the Archaeology Program, is a blessing, as a friend of mine once said. She can make one believe that human beings have the potential to understand each other. Whenever I found myself worrying about things, Helle's wisdom and warmth helped put life into perspective.

My first field trip was with, my teacher and at the time the director of the Middle East Technical University Archaeological Museum, Dr. Sevim Buluç. Along with Isenbike Togan, Sevim Buluç also played an important role in my pursuance of a doctoral degree in archaeology. At the Middle East Technical University, where I completed a substantial portion of my prior education, professors and the founding members of the Archaeometry Department, Aymelek Özer, Şahinde Demirci and İnci Togan repeatedly provided opportunities to learn, teach and research. Through their initiative, I taught a wonderful class of honor students. I can only hope that the students in that class learned as much from me as I learned from them.

During my stays in Turkey, the American Research Institute and the British Institute of Archaeology became second homes. During my appointment at the BIAA, I had the opportunity to assist, then the director, Roger Matthews and learned much about the intricacies of the publication process. I have also made enduring friendships with Dr. Yaprak Eran and Gülgün Kazan of the institute.

My fieldwork received funding and support from various groups, institutions and agencies. Specifically, the Friends of Archaeology at UCLA, the American Research Institute in Turkey, the British Institute of Archaeology in Ankara, The University of Manchester and the Kahramanmaraş University have provided funding and support at

various stages of this research. Besides these, the Metallurgical Research Institute (Maden Tetkik Arama, MTA) and the Turkish Army Map Department in Ankara; the Meteorology Station and the Water Department (Devlet Su Işleri, DSI) in Kahramanmaraş provided invaluable information and access to their archives during the process of data collection.

During the execution of the fieldwork and surveys, Mustafa Kılıçal was simply brilliant. I relied on Mustafa's driving to reach the remotest locations. His skills and intelligence always smoothed the rough edges of fieldwork. My friends in the village of Kelibişler taught me numerous lessons about landscape, material culture and remembrance. I keep dreaming that, one of those days I can continue my education in Kelibişler on how to make tarhana, grow figs and milk cows.

I know that there is at least one other person who shares the same Kelibişler dream with me: Dr. Elizabeth Healey of Manchester University. Elizabeth has been a friend that I could always turn to when I needed help. During my two stays in Manchester, her home was the perfect place to escape from the loneliness of long Christmas days. There are in fact a number of individuals who were helpful both in the field and beyond. I first met my dear friend and colleague Hakan Kale during the 1997 survey season. Our friendship grew stronger in 2000-2001 as we obsessively talked about the state of archaeological research in Turkey. Hakan did not live long enough to act on his projects but spread the passion among many of us.

During my first year of graduate studies at UCLA, Howard Eissenstat of the History Department at UCLA, must have learned archaeological theory and method with

me. Howard patiently read and corrected every single piece of paper I wrote that year. I am lucky that Howard continues to be a source of friendship and support. After completion of her master's degree at UCLA, Angela Lo assisted with the preparation of the final manuscript. Without her help, it would have taken me another year to format it. Patrick Finnerty not only inked my difficult to decipher field drawings, but also designed the plates. His artistic insight and timeliness in the preparation of the Appendix B has become the factual backbone of the arguments presented here. Numerous other individuals have been involved at various stages; I must thank Steve Bell, Tania Collas, Bekir Gürdil, Sandra Campbell, Andrew Sneddon, John Letts, Alan Greaves, Barbara Helwing, Ramualdo Caputo, Lynn Swartz, Jana Owen and Meg Abraham for friendship and support.

I have been away from the closest circle of friends and family for too long. My aunt Dr. Nesrin Hasırcı and uncle Dr. Vasıf Hasırcı of the Middle East Technical University in Ankara, always welcomed my untimely appearances at their door, jetlagged and in need of a place to stay the night. My dear friends Müge and Ufuk have become the source of my joy through their daily e-mail messages from Turkey. Most importantly, dear Niko has closely witnessed and survived the writing process. All loved ones know and understand that it will take a particular effort to rationalize the fact that research is the dominating concern in my life.

This dissertation carries a particular burden, which makes its significance more than what it really should be. During the selfish process of research and writing, I have not been able to properly mourn the series of separations, catastrophes and losses that

occurred within the last seven years. In between travels and research, I witnessed my hometown İzmit go through a devastating earthquake in August 1999. Almost twenty thousand people including friends vanished in a moment. Following many years of sadness after my mother's death coupled with the trauma of the earthquake, my father could not bear the physical and emotional pain of his heart and soon passed away to join my mother. I have two sisters remaining left as the embodiment of the hope my parents had when they started their short lives. Therefore, the time and effort embedded in the pages of this work should be dedicated to that hope: my sisters Yasemin and Gül Atakuman.

VITA

March 9, 1968	Born, İzmit, Turkey
1991	B.Sc. Chemical Engineering Middle East Technical University Ankara, Turkey
1994	M.Sc. Archaeometry Middle East Technical University Ankara, Turkey
1994-1995	Translator Near Eastern Languages and Cultures U.C.L.A.
1995-1996	Research Assistant Near Eastern Languages and Cultures U.C.L.A.
1996-1998	Graduate Student Fellowship Archaeology Program U.C.L.A.
1997-1998	Research Assistant Getty Conservation Institute Los Angeles, California
1997-1998	Reader and Research Assistant Anthropology Department U.C.L.A.
1998	Pre-Dissertation Fellow American Research Institute Turkey
1999	Lecturer Middle East Technical University Ankara, Turkey
1999-2000	Dissertation Fellow U.C.L.A Los Angeles, California

2000	Researcher British Institute of Archaeology Ankara, Turkey
2000-2001	Associate Researcher Manchester University Manchester, England
2001-2002	Reader Anthropology Department U.C.L.A.
2001-2003	Graduate Student Researcher U.C.L.A. Los Angeles, California

PUBLICATIONS and PRESENTATIONS

Eissenstat, Çiğdem

2002 A Subtle Ritual of Life: Settlement and Abandonment in the Later Neolithic of Northern Fertile Crescent. Paper submitted to the *British Association of Near Eastern Archaeology Meetings,* Manchester.

Eissenstat, Çiğdem

2002 Intra-Site Patterns of Mobility and Permanence during the 6th mill. BC: Surface Collection of Domuztepe. Research paper presented at the UCLA-Archaeology Program.

Eissenstat, Çiğdem

2001 Nature of Prehistoric Change: Views from a 6th millennium Landscape. Paper submitted to the *British Association of Near Eastern Archaeology Meetings,* Liverpool.

Eissenstat, Çiğdem

2001 Archaeological Survey and Interpretation in Kahramanmarash. Research paper presented at the University of Manchester, Department of Art History and Archaeology.

Eissenstat, Çiğdem

2000 Re-defining the 6th millennium BC in the Northern Fertile Crescent. Research paper presented at the American Research Institute in Turkey, Ankara.

Eissenstat, Çiğdem
1999 Interpretive Frameworks in the Study of the "Halaf" Material Culture. Research paper presented at the Middle East Technical University, Ankara.

Hill. C., C. Eissenstat
1998 Late Quaternary Geomorphological Changes in Southeastern Turkey. Paper presented at the *American Geological Society Proceedings.*

Eissenstat, Çiğdem
1998 Report on the Kahramanmarash Surveys 1996-1998. On file at the University of Manchester and University of California, Los Angeles.

Carter, E., C. Eissenstat, L. Swartz
1997 Report on the Archaeological Work in Domuztepe and Its Environs. *Kazi Sonuclari Toplantisi* 18: pp. 173-187.

Eissenstat, Çiğdem
1997 Research Traditions in the Near East and "the Halaf Problem". Research paper presented at the UCLA-Archaeology Program.

Eissenstat, Çiğdem
1994 Dietary Reconstruction from Chemical Analysis of Archaeological Bones. Master's Thesis, Middle East Technical University, Ankara, Turkey.

ABSTRACT of the DISSERTATION

Ritualization of Settlement:

Conditioning Factors of Spatial Congruity and Temporal Continuity

during the Late Neolithic of Southeastern Anatolia

by

Çiğdem Atakuman Eissenstat

Doctor of Philosophy in Archaeology

University of California, Los Angeles, 2004

Professor Elizabeth F. Carter, Chair

The primary aim of this dissertation is to investigate the economic and social conditions effecting spatial congruity and temporal continuity of settlement sites in the 6th millennium cal BC landscape of Kahramanmaraş- southeastern Turkey. The dissertation also explores an alternative framework to approach prehistoric change in the Northern sectors of the Fertile Crescent during the time period under study. To achieve this goal, the first phase of the dissertation constructs a chronological framework, which ultimately serves as a basis to investigate local settlement patterns

at various spatial and temporal scales. The regional analysis combines a study of three different data sets. At a regional scale, the survey data collected by Elizabeth Carter of UCLA forms the backbone of the analyses. At a micro-regional scale, this work is complemented by the catchment studies conducted by the author in different basin systems of the survey area. Finally, an analysis of Domuztepe's surface collection, at 20 hectares one of the largest 6th millennium BC sites recorded in the Near East, provides an understanding the intra-site patterns of settlement continuity, congruity and abandonment.

I identify two transitions in the diachronic analysis of settlement patterns of Kahramanmaraş; the first transition occurs at the end of the 7th millennium BC, at a time when painted ceramic traditions known as Hassuna-Samarra and Halaf were rapidly gaining popularity in Northern Mesopotamia. The second transition occurs during the latter half of the 6th millennium BC, chronologically corresponding to the Halaf-Ubaid Transition in Northern Mesopotamia. I explore the correspondence of these transitions observed in settlement and ceramics to the environmental and social factors. In particular, I search for the correlation between the social implications of spatial congruity and temporal continuity in the contexts of climatic change, subsistence practices and material culture change.

The economically informed explanations often don't acknowledge the culturally specific background that may have influenced the decisions regarding the choice of settlements and subsistence strategies in prehistoric contexts. Through an examination of the relationship between the settlement use, the places of burial and

the mortuary practices in general, I investigate the cultural significance attached to settlement places of the 6th millennium BC that may have affected the patterns of spatial congruity and temporal continuity. In the final chapter, I model a dual process of change through which a more satisfactory understanding of the 6th millennium BC material culture practices may be possible.

Chapter 1

Introduction

The 6th millennium BC settlement patterns, specifically in the northern sectors of the Fertile Crescent, are typically composed of a large number of small and short lived sites with occupation rapidly shifting from one location to another (Akkermans 1990, Campbell 1992). Within this general picture, the combination of longevity and large size for a 6th millennium site is extraordinary rather than the norm. Surprisingly, the last decade had witnessed discoveries of a number of large (10 to 20 ha) sites belonging to the 6th millennium, such as Kazane (Wattenmaker and Mısır 1994, Bernbeck, Pollock and Coursey 1999), Takyan (Algaze et al. 1991), Nisibeen (Lyonnet 2000), Mounbateh (Akkermans 1990) and Domuztepe (Carter 1996, 1997, Campbell et al. 1999).

This dissertation focuses on the archaeological landscape of the 6th millennium BC Kahramanmaraş in Southeastern Turkey. At a practical level, the results of the Kahramanmaraş Archaeological Survey conducted by Elizabeth Carter are hereby published, a regional chronological framework is developed for the prehistoric ceramic collections, and patterns in settlement are analyzed. My major practical goal is to interpret the combination of site size growth and long-term emphasis observed at the unusually large 20 ha. site of Domuztepe in a regional context of the Kahramanmaraş survey. At a theoretical and methodological level, I identify two interlinked problems that prevail in current understanding of Near Eastern prehistory: the ceramically based definition of archaeological cultures and an emphasis on a cultural evolutionary framework to position these cultures in relation to their level of political complexity.

Based on this critique, I develop a different framework to interpret the prehistoric change in the Near East.

A major portion of the 6th millennium BC in the Northern sectors of the Fertile Crescent is studied with reference to the wide scale distribution of a uniquely painted ceramic style called the Halaf, named after a site in Northern Syria where it was first recognized (von Oppenheim 1933). Primarily based on its chronological positioning between the two classic constructs of social change in Near Eastern Prehistory, namely the Neolithic and Urban Revolutions (Childe 1952), some researchers argued that the most appropriate interpretation of the Halaf social organization may be as an intermediate society of increasing complexity (e.g., Redman 1978, Watson 1983b, Campbell 1992).

Certainly craft specialization observed specifically in the production of ceramics, coupled with their wide scale distribution within a wider exchange network, which also circulated obsidian amongst other materials, provides a supporting clue to suggest a complex form of organization with a degree of hierarchical order and centralized authority. On the other hand, at regional scales of investigation the archaeological record lacks further evidence to support the suggested level of complexity within Halaf societies (Wilkinson 1990b, Akkermans 1990, Campbell 1992). A probable widespread mobility in settlement and the lack of clear signs of settlement hierarchies point toward a more loosely integrated social system that defies easy classification within a cultural evolutionary narrative (Akkermans 1990).

Leaving aside the extraordinary presence of Domuztepe, various excavations at much smaller sites such as Arpachiyah (Mallowan and Rose 1935) suggest that the social importance of a site may not necessarily be related to its size, in the Halaf case. In particular, the strongest evidence for craft specialization and exchange taking place within a potentially institutional framework comes from Arpachiyah, one of the smallest excavated Halaf sites at around 1ha (Mallowan and Rose 1935, Campbell 1992).

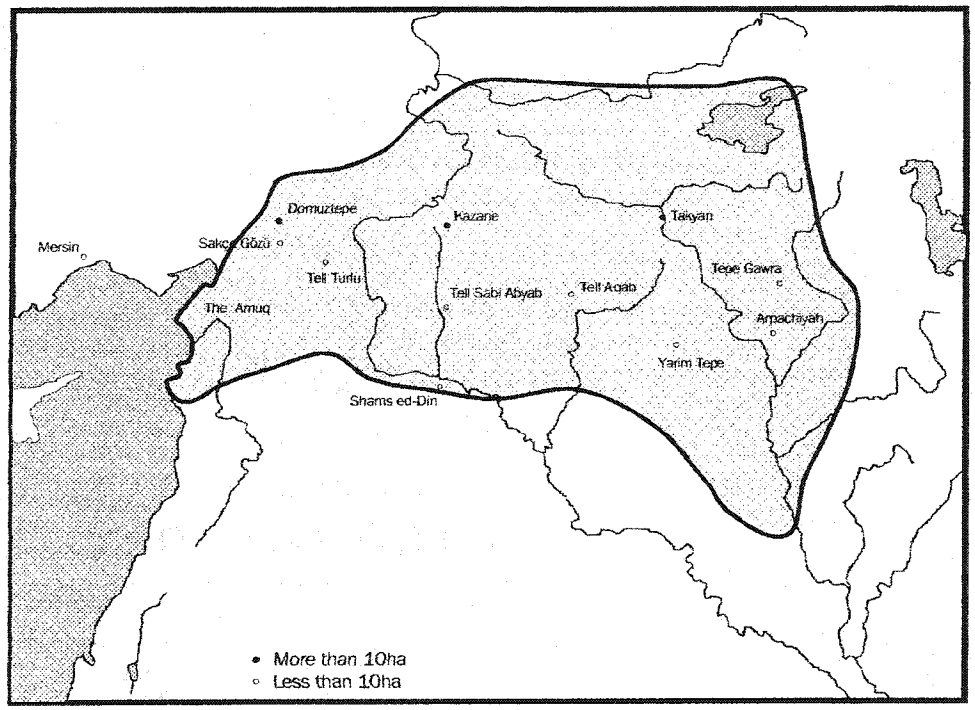


Fig. 1.1. Distribution of the Halaf Material Culture in the Near East and some sites mentioned in the text.

At 20 ha, Domuztepe is one of the largest known Halaf Period sites and is located within the regional focus of this study, in the Kahramanmaraş region, Turkey. The site also has by far the deepest prehistoric stratigraphy within this region, possibly as much as 15 meters below top of the mound. In this local context, the prominence of

such a large and long-lived site stands out as a major contrast to the ubiquitous existence of small-scale mobile settlements that characterize the landscapes of the time period. Can we now suggest that evidence for site hierarchies and a degree of social complexity is represented in this contrast?

Before an interpretation can be achieved, a few problems of the archaeological method and practice should be addressed. To start with, the problems imposed by practices of residential mobility stand out as major backdrop to a successful evaluation of site size and population estimates. Conventional ways of explaining settlement mobility in the Halaf Period have centered on two interrelated phenomena: the first one concentrates on the effects of climatic change, on the soil productivity, whereas the second and somewhat complementary perspective concentrates on the human induced change in environment. Mobility from this perspective is often interpreted to be a reflection of mixed subsistence practices, which combine pastoral nomadism with extensive agrarian use of landscape in a dry-farming regime (Wilkinson 1990a, Akkermans 1990, Campbell 1992, McCorriston 1992).

While natural or human induced environmental change can trigger factors for some forms of mobility, this is not the only possible response. In non-state societies social forms can be flexible and commitment to traditions and beliefs can structure a major part of the settlement patterns. In such contexts, mobility can be triggered by variety of factors. It entails movement that may be part of an ongoing strategy of shifting residence related to cultural traditions as well as a reorganization of local social and economic patterns (Varien 1999). From this perspective, the interpretive models

emphasizing population-resource equilibriums may fall short of explaining more subtle yet significant reasons behind maintenance of long-term focus on certain locations. At a different scale, because the methodology involved in such investigations demands a bounded and often static site definition (e.g. Vita-Finzi and Higgs 1970), different degrees of mobility represented in various scales of settlement analysis may be missed. Ultimately, this may cause unrealistic assessment of number of sites and related calculation of population.

The recent theoretical developments in landscape archaeology may be a point of start to resolve some of the issues mentioned. It has been suggested that the concept of "landscape" in archaeological discourse has moved beyond a mere analysis of settlement patterns in their environmental resource context (Barrett 1994a, Bradley 1993, 1998, 2002, Tilley 1994, Thomas 1996). Landscapes of human inhabitation are now perceived as representational artifacts of a belief in a particular order of life. More importantly, the concept of "landscape" is now thought as "the pattern that connects" all aspects of life, places, people and objects (Chapter 3). The premise is that the spatial configuration of objects, people and places should reflect social features and culturally specific cognitive maps (Cowgill 1993). Thus, an analysis of the spatial configuration should reveal the deep patterning that condition the underlying structure (Anschuetz et al. 2001).

For the practical purposes of this study within this context, the persistence and growth of particular places may be framed to define an inherently fluid landscape of settlement and the structuring principles of social system that reproduces the patterns of

mobility and permanence at the same time. Examination of patterns in the spatial distribution of long-lived sites in relation to more ephemeral ones in return helps to evaluate the social order.

This theoretical stance may allow us to see the local dimensions of variation while acknowledging wider principles of structuring that affect the material construction of worlds during the 6th millennium BC. I wish to emphasize however that, in the use of the terms such as "structuring principles" or "Halaf Period symbolism", I am neither referring to a universally applicable set of structures of meaning, nor am I referring to a universally applicable Halaf understanding of the world. On the contrary, as will be hopefully clearer throughout the discussions embedded in various chapters, I believe none of them ever existed. My aim is to refer to the material mediums through which deep structures are expressed. This is often culturally situated and defies application of a common set of rules. In the Halaf case, the wide-spread distribution of a set of similar looking objects (ceramics, figurines, stamp seals, obsidian, houses), may give an illusion of a unified "Halaf Culture". In my reading, however, this wide spread success of a set of objects refer to a social process in which a convergence of a mosaic of local communities may have been facilitated via the common symbolic repertoire provided by the artifacts.

Whereas the symbolic repertoire may appear similar, the understanding of what is signified requires an in depth understanding of local contexts in which the objects were employed. For example, while in some regions of Northern Mesopotamia, Halaf ceramics were more intensely employed than others, in other areas such as the

Kahramanmaraş region, they existed along with local ceramic traditions. Whatever was signified by the Halaf ceramics, it would potentially have a very different meaning in the local context of Kahramanmaraş than that of North Iraq. What is significant is that these artifacts, in their sheer physicality, would be readily recognizable to a mosaic of communities of the Northern Fertile Crescent cross-culturally. Artifacts of this kind no doubt brought people together and created a field of discourse in which the communication was facilitated and more importantly people's thinking of the self and community was transformed.

Settlement patterns should be approached with an understanding of this social process. In practical terms, through an analysis of spatial configuration of places and their patterns of destruction and preservation, the structuring factors of the deposition, both social and environmental, can be investigated (Richards and Thomas 1984). Throughout a careful analysis, some artifacts or equally places can be found to be deliberately destroyed or abandoned while others may have been preserved in peculiar ways. This simple principle may reveal patterns of remembering and forgetting which are charged by traditions and power structures emphasized in those traditions (Chapter 3).

Within the practical limits of the data, I employ this methodology to the study of settlement, mobility and abandonment during the 6th millennium BC. The settlements can be viewed as symbolically significant artifacts, where history of relationships were inscribed and transmitted in particular ways. For example, a study of the landscape of settlement from the perspective provided by the long-lived tell sites can be related to the

preservation of continuity and investment made on its visual representation. This investment should not need to be an economic one, but a socially constituted one embedded in particular concepts of time and community.

The following chapters attempt to juxtapose changes in settlement patterns, climate, subsistence, burial practice and material culture to chart out the route of a substantial transformation precipitating in Kahramanmaraş during the 6th millennium BC. Data for the thesis has been produced through three different studies in Kahramanmaraş Survey Region.

1) A reconstruction of prehistoric settlement patterns and prehistoric regional chronology based on a re-examination of the original survey conducted by Professor Elizabeth Carter of UCLA. The site catalogue documented in the Appendix A is based on a combination of two analyses: Re-examination of original pottery collections (Chapter 4, Appendix B) and additional visits to originally recorded sites. These data have been compared to original records kept by Professor Carter in a separate database and combined for the final catalogue presented here.

Domuztepe excavations have provided a good context for Late Halaf ceramic assemblages and their internal chronological relationships in the region. I used this detail for two purposes: to model mobility during the Late Halaf Period in the region and also to understand the processes leading to the abandonment of the site of Domuztepe (Chapter 6: Surface collection of Domuztepe). Therefore, an extended discussion of Domuztepe's ceramic phases is also included.

2) A reconstruction of population at the site of Domuztepe through a catchment study (Chapter 7, Appendix C). This reconstruction was based on the following data collected by myself: Intensive walks within the 5km radius of Domuztepe to assess the agricultural potential and analyze population equilibriums. Documentary evidence of historical maps, geological studies and aerial photographs supplied by various governmental agencies in Turkey helped to reconstruct the environmental make-up of the region before the current major canal works and agricultural practices unpredictably transformed the area. A short-term geological reconnaissance in the survey region carried out with Dr. Chris Hill in 1997 (Hill and Eissenstat 1998, Eissenstat 1998) contributed to the understanding of the geologically rich and sensitive nature of the survey region. Another reconnaissance made by the author around Domuztepe in 1997-1998 helped to understand the extent of Holocene alluvial activity. In the pages of the dissertation, I consider these data in the context of the recent climatic studies of the prehistoric past.

3) A reconstruction of Domuztepe's topographic structure, occupational size and a reconstruction of final phases of occupational history. The topographic data was collected and made available for study by the Manchester portion of the Domuztepe Project team. The reconstruction of the final phases of occupation on the site is based on a statistical study of the surface collection (Chapter 6). This evidence is then considered in the context of a particularly rich and informative funerary deposit with associated ritual activity, the so-called "Death Pit" (Chapter 8, Appendix D).

The first phase of the dissertation presents the data in Chapters 4 through 6. In the second section (Chapter 7-9), I interpret the results from angles summarized in this chapter and elaborated in Chapters 2 and 3.

The case study structures a major part of the discussion and implications of this research. Therefore, Chapter 2 is designed to discuss the problems with Domuztepe that are related to the problems with the construction of prehistoric change in the Near East. Chapter 3 evaluates the theoretical and methodological issues mentioned in this chapter in an attempt to develop a better understanding of the problems associated with Domuztepe and Kahramanmaraş Region. In particular, problems surrounding mobility, abandonment and longevity will be introduced, and recent landscape approaches and problems involved in studying tell settlements of the Near East will be addressed. Following this review, a methodology is proposed within which operational scale and evidence is discussed.

Chapters 4-5 introduce the study region and present a prehistoric regional analysis of the Kahramanmaraş Valley. Firstly, the survey sites and ceramic types of prehistoric Kahramanmaraş are introduced, a regional chronology is proposed and diachronic change and synchronic variations of settlement patterning is discussed. This framework helps to group and organize numerous sites within the landscape and describe more lucidly the cycle of settlement in micro-zones, which is the subject of Chapter 5. In Chapter 6, I explore the intrasite patterns of mobility and spatial congruence through an examination of Domuztepe's surface collection.

In Chapter 7, I model spatial congruity and temporal continuity for 6th millenium Kahramanmaraş. I also introduce a new definition of tenure, which acknowledges the biographical dimension of social identity and its transmission. Chapter 7 also discusses residential mobility and subsistence relationship and proposes some underlining principles of settlement differentiation. This reveals an image of prehistoric life and underlines certain concerns within a prehistoric society. Specifically the contextual link between settlement and burial during the 6th millennium is explored in Chapter 9. For example, the order behind some degrees of mobility and longevity can be searched in practices surrounding death. Practices surrounding death during the 6th millennium BC may have ordered space of residence and reproduced the social landscape at various levels in loosely integrated communities of the Halaf Period. In fact, a contextual consideration of burial and settlement practice in a diachronic perspective may provide an encompassing frame to understand the underlining factors for the transformations observed in the study of the Kahramanmaraş landscape (Chapters 7 and 8). The conclusion chapter (9) summarizes the dissertation and provides a discussion on the proposed understanding of the 6th millennium landscape, society and long-term change.

I hope that the dissertation will contribute to a renewed understanding of the 6th millennium BC in the northern sectors of the Fertile Crescent by successfully integrating controversies present in the archaeological record in a new interpretive framework. At a theoretical and methodological level, I also hope that the recent concepts of "landscape" can be employed to understand the Late Neolithic "tell-scapes" of the Near East as representations of a potentially very different social order.

Chapter 2

A Background to the Time Period and Emergent Issues

The currently accepted framework for the Near Eastern prehistoric developments emphasizes a unilinear developmental scheme often associated with the cultural evolutionary theory. In the Near East, the first strides toward political and social complexity are understood to be initiated with the inception of village life in the early Neolithic, gradually leading to the rise of the city states (Redman 1978, Adams 1981, Roaf 1990). Although this framework may hold for some parts of the world, the prehistory of the Northern sectors of the Fertile Crescent, particularly before the 5th millennium BC, have not so far been confidently located within the widely accepted models of the cultural evolutionary theory (Johnson and Earle 1987).

The time period under examination (later 7th through the 6th millennium BC) in the Near East is defined and often analyzed under the rubric of origins and chronological development of painted ceramic traditions. In rough chronological order, these traditions are known as Hassuna/Samarra, Halaf and Ubaid. Sometime in the second half of the 7th millennium BC, painted ceramic traditions of Hassuna and Samarra make their first appearances in a small area of North Iraq (Campbell 1992). Although the Hassuna may be a little earlier than the Samarra tradition, the two styles are often difficult to distinguish and appear to merge gradually in pre-Halaf contexts with Samarra styles dominating the assemblages (Akkermans 1990, Niuwenhuyse 2000). At the same time a very quick spread of painted ceramics occurs both in North

and South Mesopotamia eventually associated with two variant social developments in the two regions.

In the southern Mesopotamian context, quickly the Samarra tradition merges with the Ubaid 0 (Lebeau 1987), marking the first seeds of an ever-growing social and political complexity in the region. In the south, the accompanying social developments are observed in 5 stages, from Ubaid 0 to Ubaid 4 followed by the rise of Uruk cities (Adams 1981). In the first part of this development, i.e. Ubaid 0-2, sites appear to be small villages with 1 to 2 ha sizes with no evidence of public architecture. The economies of these villages seem to be based on irrigated barley and wheat accompanied by herding of cattle, pig, sheep and goat.

In social terms, the southern Ubaid 0-2 sites appear small and dispersed (Adams 1981), indicating some sort of village level organization. In Ubaid 3-4, a two-tiered settlement can be more visible. In this pattern, small sites of 1-3 ha sizes can cluster around towns of 10-12 ha located close to river channels. Among the two sites excavated, namely Eridu and Ur, the site of Eridu has a temple context. Some researchers suggested that the labor demands to build such structures may have been relatively minor (Patterson 1989; 314). The burials associated with the later Ubaid occupations at these sites come from cemeteries adjacent to the sites rather than the mound itself (Forest 1983; 115, Wright and Pollock 1986; 328).

Villages and towns may have been integrated at the level of ritual but the economic context of this integration is difficult to assess. Mesopotamian temples from later periods have been argued to function as economic distributive centers as well as

ritual places (Oates 1978, 481). On the basis of this suggestion, some researchers argued that the southern Ubaid society was organized at the level of chiefdoms based on redistribution of staples rather than of wealth objects (Stein 1994 a, c). However, transmission of such wealth gained from redistributive control (by individual families?) is a difficult case to demonstrate.

The Northern variant of the general Mesopotamian ceramic and social trend is called the Halaf. The Halaf Period is roughly contemporary with southern Ubaid 0-2/3. The Halaf Period is thought of in slightly different schemes, all informed by the chronological development of ceramics. While some researchers continue to use the original Early-Middle-Late frame (Mallowan 1935, Hijara 1980, Davidson 1977), recently Early I-II and Late I-II frame has gained more popularity for its finer detail (Campbell 1992, Nieuwenhuyse 2000).

A major portion of the 6th millennium BC in Northern Mesopotamia, which forms the focus of this study, falls under the Halaf Period. Following the Samarran spread, Halaf cultural features simultaneously develop over different regions of Northern Mesopotamia in a relatively short time (Copeland and Hours 1987a,b, Campbell 1992), representing the first wide-spread cultural horizon in the Near East (LeBlanc and Watson 1973). The Halaf has been defined on the basis of a widespread distribution of an artifact assemblage accompanying the famous intricately painted ceramics. The circular architecture called tholos, stamp seals, stone bowls, obsidian objects and figurines were distributed over Northern Mesopotamia within a short time

period and upon a rich Neolithic legacy (Perkins 1949, Campbell 1987, Mellaart 1975, Watson 1983b).

The first wave of findings came form the excavations in Tell Halaf (von Oppenheim 1933), soundings in Carchemish (Woolley1934) and explorations in Sakçagözü (Garstang 1937). However, it was Mallowan's excavations at Arpachiyah, which produced the most detailed and intriguing information on the time period and determined this small site in North Iraq as the type-site of the Halaf "culture" (Mallowan and Rose 1935).

Although very little work was done until the late 1970's, the last 20 years have seen renovation in interest in the time period. For example, Arpachiyah was re-excavated in the late 70's (Hijara 1980) and the Russian excavations at the Yarim Tepe site clusters yielded intricate findings from the Halaf material assemblage (Merpert and Munchaev 1969-1993). Studies at Tell Aqab (Davidson and Watkins 1981), and Girikihaciyan (Watson and LeBlanc 1990) focused on the importance of trade in the distribution of the Halaf pottery.

Halaf ceramics and its origins have come to dominate the archaeological perception of 6th millennium in Northern Mesopotamia and immediately adjacent areas. Many inquiries have been made into the distribution of what was termed to be the Halaf material assemblage. While the earlier research suggested migration of Halaf folk from a North Iraqi center (Mallowan and Rose 1935), a more sophisticated explanation has been distribution by trade from regional centers (Davidson 1977).

Based on patterns in ceramic distribution, some effort has been given to find the origins of "Halaf culture" in some fixed geography (Mallowan and Rose 1935, Akkermans 1990). Northern Iraq, producing some of the best examples of Halaf Pottery has generally been accepted as a center of the pottery and its culture (Mallowan 1935, Hijara 1980, Campbell 1992). Accordingly, any site away from the designated core area was labeled "Halaf-influenced" (e.g Amuq, Queiq).

In terms of social organization, an increasingly complex intermediate society is imagined for the Halaf period societies (Redman 1978, Watson 1983b, Campbell 1992). However, very often it is difficult to find support for a complex social organization beyond the assumption that chronological positioning of the Halaf period should suggest an increasing trend toward urbanization. Halaf Period settlements appear to be also integrated at the village level, with mobility being a wide-spread practice. Existence of public architecture is difficult to demonstrate and burial practices highly vary although there are some cross-cutting parallels (Chapter 9). Akkermans suggested that "Halaf social organization was mainly based on small-scale egalitarian family or kin relationships and that decision making primarily relied on consensus rather than upon the exercise of power by formally sanctioned authorities. In this sense Halaf society can be defined as non-hierarchical and tribal" (Akkermans 1993: 289). The richness of a range of beautifully crafted artifacts and specifically so-called "stamp seals" has tempted other researchers to suggest complex mechanisms behind the distribution (Davidson 1977). Based on patterns of ceramic exchange, the chiefdom concept has been suggested (Watson 1983b) but with revisions as a low-level one.

More recently the regional studies in North Jazira (Wilkinson 1995, Campbell 1992), Euphrates-Tigris (Algaze 1986, 1991, 1994), Balikh (Akkermans 1990) and Khabour (Lyonnet 2000) have produced results that focused on understanding Halaf Period communities from a more encompassing perspective. Some emphasis was given to understanding the settlement differentiation and the social system behind it (Chapter 7). For example, a pattern of cyclical/shifting occupation among the short lived sites has been suggested (Wilkinson 1990a, Wilkinson and Tucker 1995, Akkermans 1990), pointing toward a "loose" relation between land and people (Akkermans 1990).

Discoveries and excavations of large sites such as Domuztepe and Kazane within the last 10 years have been hoped to provide the missing evidence that could confidently establish existence of a politically complex Halaf society. Long-lived and large mounded sites have always been a center of attention for excavation projects in the Near East since they provide good stratigraphic sequences to reveal continuous local chronologies. However, understanding how the small and large sites were related within the same social context has been a more difficult subject.

Very often short-lived sites are thought to represent mobile groups that were economically separated from the settlers and in a mutual exchange relationship. Some researchers further suggest that the contemporary existence of circular and rectangular architecture signify these two socially and economically distinct groups sharing the same residential space (Verhoeven 1999), although there is no satisfactory evidence to assume that the two different structures should reflect two different social groups.

In ceramic terms, following a transitional period, known as the Halaf-Ubaid-Transition, the Northern Mesopotamian ceramic traditions fell under the influence of southern Ubaid ones during the southern Ubaid 2/3-4 periods (Breniquet 1987, 1989, 1996). From this point on, the social and historical trajectories of the Southern and Northern Mesopotamian communities are believed to have merged. The Northern Ubaid Period is generally acknowledged as a prelude to the Uruk expansion (Stein 1994, Algaze 1993, Oates 1983, 1987). The Ubaid expansion is believed to have begun with the appearance of the Ubaid ceramic- bearing sites in the Hamrin Region of Iraq. During this expansion, Halaf sites and Ubaid sites may have existed within the same region (Oates 1983, Jasim 1985, Copeland and Hours 1986). In the Hamrin Region, the two traditions were not observed at the same site, however, casting some doubt on the contemporaneity argument.

With the expansion of Ubaid ceramics, some sites continue to be settled from Late Halaf onwards, but in other areas Ubaid sites are often on previously unoccupied soil. In the Balikh, for example, an increasing agglomeration with residences becoming more nucleated and less mobile have been observed. Areas that were formerly unoccupied and unsuited for dry farming witnessed the development of some large Ubaid period settlements. This was suggested to indicate a change toward irrigation-based intensive methods of agriculture (Akkermans 1990: 322). In North Iraq, Tell el-Hawa develops to be a major center at this time (Wilkinson and Tucker 1995). The Ubaid evidence from the smaller 3ha site of Gawra XIII shows that three "monumental" buildings around an open square resembling southern Eridu styles of architecture

(Forest 1987) may be indicative of importance of new rituals integrating the society during this economic and social change.

The Halaf-Ubaid Transition according to the recent studies may actually underpin a substantial social and economic transformation in Northern Mesopotamia (Breniquet 1996). Breniquet suggests that the population growth potentially by the Late Halaf period may have caused a growth of social inequality within the Halaf. This disequilibrium may have made the Northerners more prone to a process of "acculturation". In this process "the Halaf Culture" would have borrowed traits from the politically and technologically superior "Ubaid Culture". According to the Breniquet's model, previous contact may have existed between the two groups eventually leading to the adoption of the "Ubaid Culture".

One basis for such an argument was the changes observed in the settlement as discussed previously. The Ubaid settlements in the North appeared less mobile and sometimes outside the limits of the dry farming strategies. Large sites such as Hawa (Wilkinson 1995) in North Iraq, grew potentially within a ritually integrating context of the southern style temple structures. This pattern may indicate the use of more intensive techniques of agriculture and organization of society, which were probably practiced in Southern Mesopotamia throughout the Ubaid Period. Techniques in the production of ceramics via an introduction of tournette were also seen to have caused changes in ceramic production (Breniquet 1996, Nissen 1988). Ubaid period ceramics followed a trend toward simpler, less frequently painted decoration, thick walled vessels and a decrease in the number of vessel shapes and painted motifs in general (Akkermans

1988b). Yoffee (1993) suggested that the spread of Ubaid ceramics is evidence of the spread of the Ubaid "way of life", which should indicate convergence of beliefs and values within Mesopotamia. It is believed that this is the first time North and South may have come under the same common cultural denominator, although neither the nature of this commonality nor its conditioning factors have been investigated.

The Kahramanmaraş Region and Domuztepe

While Mesopotamia proper has witnessed the general developments described above since the inception of painted ceramics in the later 7th millennium BC, immediately surrounding regions beyond the catchments of the Euphrates and the Tigris, have gone through slightly different processes. In fact, these areas have conventionally been considered as "Halaf influenced" as opposed to a "core" in Mesopotamia (Perkins 1949, Braidwood 1960). The Halaf influenced areas (e.g. the Amuq, Mersin, Qoueiq, Kahramanmaraş) usually have distinctive local ceramic assemblages that accompany the Halaf ceramics during the 6th millennium BC. Suspected influence of the Halaf ceramics on these areas is believed to have occurred sometime by the Late Halaf, although precise dates are difficult to establish. The Kahramanmaraş region can be thought of as one such "Halaf influenced" region. The local 7th millennium ceramics continue to be an important component of the Halaf period ceramics. Halaf ceramics in the "heartlands" can make up to 80-90% of the excavated assemblages, whereas in KM Halaf ceramics are found in relatively smaller percentages, 50-60% of all assemblage (eg. Domuztepe).

Domuztepe, one of the largest Halaf Period sites situated in Kahramanmaraş, was found in 1993 by a UCLA survey team led by Elizabeth Carter (Carter 1996, 1997). The site is impressive in size and richness of cultural deposit dating to the Halaf Period. Excavations started on the site in 1995 as a joint UCLA-Manchester University project and finished its first phase in year 2000. Specifically the size of Domuztepe and its chronological positioning between the Neolithic and Urban Revolutions led the excavators suggest that the site must be an early sign of emergent complexity in the Maras plain during the 6th millennium (Campbell et al., 1999).

Although the size of Domuztepe and the richness of its artifactual deposits give an image of "emergent complexity" (Arnold ed. 1996), the nature of this complexity is difficult to articulate within the conventional social evolutionary narrative of prehistoric change. The first problem in the series is the size of Domuztepe; while most Halaf sites are 1 ha or less, Domuztepe is a 20 ha site. Site size is often presented as an important indicator of social and political complexity if accompanied by evidence of regional settlement hierarchy and centralization of administrative systems. Like its contemporary landscapes in Northern Mesopotamia, the Kahramanmaraş Plain gave no conclusive evidence in support of a politically complex settlement pattern that would place Domuztepe at the center. On the contrary, Halaf period sites in the region are small with no clear evidence of a size hierarchy. Where found these sites appear in clusters of a few within a 2km radius, with the closest such community to Domuztepe being 12km to the northwest, a day long round trip.

The second problem concerns the abandonment of Domuztepe at the end of the 6th millennium BC, never to be occupied again until Roman times. Abandonment at the height of emergent complexity is an unexpected development. On the more interesting side, almost all of the recorded Halaf Period sites in KM were deserted within a few hundred years time of Domuztepe's abandonment in favor of new locations in the valley. The new settlement pattern of the 5th millennium in Kahramanmaraş was more dispersed and presented a rather "backward" existence in the absence of any recorded large site.

Furthermore, excavations at Domuztepe have produced material from the Late Halaf Period with some peculiar links to the Ubaid tradition. In fact for that reason, at the initial stages of the excavation before the C-14 dates were known, the site was thought to belong to a time period immediately after Late Halaf, which was tentatively named as Post Halaf. The period marked by the appearance of the Ubaid style ceramics is called the Northern Ubaid in Northern Mesopotamia on the basis of the evidence from Tepe Gawra and it is generally acknowledged as a precursor to the Uruk expansion (Stein 1994, Algaze 1993, Oates 1983, 1987). The Kahramanmaraş Region has Ubaid pottery present at some sites gradually developing out of the Late Halaf tradition. However, there have been only a couple of typical Uruk sherds found in all the recorded sites. The local Late Chalcolithic in the area is not well understood, but the Bronze Age sites give support for a complex organization and centralization (e.g. KM 55 in Appendix A). What is peculiar about Domuztepe is that although seemingly located at the fringes of the Halaf world, the site gives evidence for some of the earliest

known examples of the Halaf-Ubaid transition in the North, only to diverge later from the North Mesopotamian phenomenon of Uruk expansion.

Communities such as the ones represented in the Kahramanmaraş region and Domuztepe at the fringes of the Halaf world can bring distinctive outlooks on a process and provide new views on how to re-consider the global vs. the local in both diachronic and synchronic perspectives.

Emergent Issues

Two overarching issues underline much of the subsequent discussion. The first concerns the definitions of archaeological cultures in the Near East, and the second concerns the employment of an evolutionary framework that links these cultures successively. Although the archaeological literature has in general questioned the validity of archaeological cultures in understanding social developments in prehistory, new ways to re-think such developments have not been offered in the Near East.

Whereas ceramics are undoubtedly one of the most important tools to construct chronological frameworks, relentless use of the term "culture" or "society" attached to the ceramic types very often create a confusion in the conceptualization of the past and results in unrealistic research inquiries into the nature of prehistoric change. Methodologically speaking, a detailed study of ceramic styles for chronological purposes can correlate individual communities in time, it can confirm their co-existence or it can calibrate a local sequence of archaeologically observable events. It cannot confirm, however, the existence of a culture category merely based on transregional comparisons of artifact types.

Realistically, ceramics probably define only an aspect of those groups who used similarly produced and painted ceramics. In this regard, a valid question remains: why and how did similarly adorned and painted ceramics become a part of the material culture of a mosaic of communities distributed over various sectors of the Fertile Crescent? The answers to this question however do not necessarily reside only in the analysis of those communities who used painted ceramics, but also those that show similar trends in their developmental paths (as may be evidenced in settlement patterns for example), even in the absence of some Mesopotamian ceramic tradition. In summary, understanding prehistoric change through ceramically defined culture categories may not be viable to investigate the much wider context.

For the lack of a better framework, archaeological interpretations of the Near Eastern prehistory usually stick to the Childean view of major transformations. For example, while we talk about a Neolithic Revolution based on the evidence from the Levant, Anatolia and Northern Mesopotamia, we switch to the South for progressive linking of past achievements toward the "Urban Revolution". Over the last 25-30 years, the cultural evolutionary frame has elaborated this view in a social organizational frame as a succession of tribes, chiefdoms and states.

In the current construction, the developments from the inception of sedentary village life to the rise of politically complex societies are often explained through an understanding in which ceramically defined culture groups evolve toward an ever growing complexity. Such a development was indeed observed in the Southern Mesopotamian alluvium in a continuous fashion (Adams 1981). Southern Mesopotamia

or rather Sumer has always attracted more attention than anywhere else in the Near East since the beginning of the last century. Extraordinary findings in this region ultimately greatly influenced the writing of prehistory in the Near East as a whole. Such continuity and unilinear development toward the rise of politically complex city-states is not easily observable in many sectors of the Northern Fertile Crescent such as Kahramanmaraş, on the other hand. Considering the much more striking richness and variety of the Neolithic Period in the North, this absence of evidence for the "in between" periods is interesting.

Kahramanmaraş, located at the northwestern border of the Halaf material culture distribution, can provide a new context where variation is acknowledged and a new frame is introduced to understand the nature of social change during the 6th millennium BC. The region, because of its strong local characteristics preserved in context of Mesopotamian influences, can provide a lens to see the 6th millennium beyond the unificatory image of the Halaf. Through this lens, it is possible to reconsider the validity of lumping a highly varied mosaic of local processes under the spell of a ceramo-cultural one.

While the dissertation because of its subject geography attempts to link a "fringe" region to the Mesopotamian sphere, it is also concerned in understanding the local reaction to a larger process and its impetus. Thus, I aim to bring together the peculiar aspects of material culture, settlement and burial patterns which should give a substantial depth and context to understand the local variation in a wider frame. For example, whereas some comparable processes may be highlighted in distribution of

ceramics, subtle similarities are also visible in comparative view of settlement patterns. The settlement patterns in the late 7th through early 6th millennium BC in Kahramanmaraş are comparable to the contemporary landscapes of Mesopotamia, although the ceramic assemblages cannot be demonstrated to have links to the Mesopotamian ones at this time. It is possible that influences of a similar nature may have conditioned the North Mesopotamian communities along similar lines during the later 7th and earlier 6th millennium BC. This could have ultimately resulted in the converging of a mosaic of communities toward use of the common symbolic pool of the Halaf material culture. While this convergence may have taken place simultaneously in so called the Halaf heartlands, the "influenced" areas such as Kahramanmaraş may have preserved their local characteristics even during the strongest influence of the Halaf material culture in the areas mentioned.

To reframe the above suggestion in methodological terms, it is plausible that what appears to be standardized in ceramics during the 6th millennium BC may in fact be masking subtle but important differences in much deeper historical trajectories. Whereas the current understanding of prehistoric developments emphasizes a vision toward the rise of city-states, an important part of a potentially very different process linking the Neolithic to the latter may have been missed.

For example, from the perspective of continuity, many aspects of the 6th millennium BC symbolism, material culture and social practice appear to have references to the earlier Neolithic. The Halaf Period witnessed the large-scale adoption of a common symbolic pool in the body of a set of artifacts, particularly ceramics. Such

a wide spread adoption of a common set of objects may have facilitated a converging social process in various regions of the Northern Fertile Crescent (Yoffee 1993). Cauvin's (2000) recent research indicates that certain elements of this symbolic pool may refer as far back as the early Neolithic Period. For example the wide spread use of obsidian, emphasis on symbols of bucrania and female figurines may indicate social contexts in which the old messages from an earlier Neolithic history continue to exist in new contextual relations of the post-Neolithic landscapes of the 6th millennium BC. That is to say, in terms of a successive linking of social processes, the 6th millennium BC in the Fertile Crescent appears to belong to the Neolithic trajectory as much as it may belong to the Urban one.

The difficulty of placing Halaf societies comfortably in an evolutionary framework may be a stimulus to confronting the inherent duality of the 6th millennium BC archaeological record. It may be that the unresolved presence of controversies and dualities in the archaeological record may be taken as an indication of a profound transformation during the 6th millennium BC in many realms of prehistoric life, including ideational understandings of material world and structuring principles of social order. Such a transformation would make it difficult to frame the time period within a simplistic understanding of social evolution as a linear and progressive phenomenon.

At the very root of the evolutionary framework, there lies an assumption that the relations between the material world and people are based on economic principles and that these principles are universally applicable. While the economic principles are no

doubt important, belief systems and cultural practices are equally powerful motivators of human behavior and often responsible from constituting the cultural variations of human existence that archaeologists and anthropologists alike seek to explain. It is true that human beings are biological entities in need of food, shelter and reproduction all of which can be responsible from various facets of efficient "economic" behavior. Yet, without the beliefs and traditions that create the immense cultural variety in styles of such behavior, there would neither be need for the term culture nor for the discipline of anthropology.

In this context of incredible diversity of human experience, it is perceivable that what appears to be a meaningful rational choice to us under our economic relations to the material world may not prevail in cultural contexts where relations to the material world are imbued with peculiar belief systems within which individuals, objects and places may be connected through different principles. This particular stance may be a point of start to reframe the controversial nature of the archaeological record of the Northern Fertile Crescent in the 6^{th} millennium (Chapter 3).

A new view of material culture emerges in this reconfiguration that objects of long time focus, for example stamp seals or obsidian may be revealed as artifacts with capacities to carry the clues of multiple processes stemming from the Neolithic past and leading to the Urban future. The material culture of Halaf Period may be full of contradictions as they were actively involved in this process of transition. Today's archaeologists may have emphasized only a portion of the narratives hidden in the artifacts, which appeared to be closer to the understanding of the world within which we

today live. This discussion will resurface again in the conclusion chapter where I attempt to explain the argument with a graph (fig. 9.2). For the moment, I continue with a review of the recent readings of the Halaf material culture through which I hope to acknowledge the possibility of multiple processes in the 6th millennium BC that may be difficult to satisfactorily explain via the unilinear vision of time and prehistoric change.

Recent Readings of the Halaf Material Culture

Despite difficulties with conclusive arguments for or against them, there are three important cases often cited to fit Halaf into an evolutionary trajectory as an intermediate level society; long-distance exchange in obsidian, the existence of "stamp seals" as indicators of some form of administrative complexity and the famous context of Arpachiyah Burnt House as a central storage associated with central control. The recent studies specifically explore and highlight the social contexts within which these artifacts were used and gained significance.

Obsidian

Long distance exchange in obsidian has been the topic of major research inquiry for the Neolithic Period in the Near East. It has been demonstrated that there are broad geographical regions where the obsidian supply of Anatolia and the Fertile Crescent was maintained: Central Anatolian, East Anatolian and Caucasian resources (Cann and Renfrew 1964, Renfrew, Dixon and Cann 1966, 1968, Wright 1969; McDaniels 1976; Epstein 1977, Francaviglia 1990, Cauvin et al 1986). Obsidian became an item of exchange during the pre-pottery Neolithic period although its quantities were much smaller in assemblages of the earlier Neolithic (Campbell 1992; 146).

By the Late Halaf, obsidian is consistently common in all parts of the Fertile Crescent. Campbell (1992) argues that the exact frequency ranges widely but in north Iraq and North-eastern Syria it ranges from above 30% of the lithic assemblage to the height of 80% at Tell Aqab (Davidson and Watkins 1981). Also its distribution to the southern extend of the Halaf spread in Hamrin was also achieved in much higher and steady quantities at this time (Bulgarelli 1981) indicating that the Late Halaf had indeed seen a great expansion of a variety of material cultural traits.

A small site Umm Qseir in the Khabour has apparently 42% of its lithics made up of obsidian (Hole and Johnson 1986-87). Girikihaciyan closer to the sources has only 24% (Watson 1983a) while the western Halaf sites such as Sabi Abyad have approximately 20 % of their lithic assemblage consisting of obsidian. At many investigated sites, such as Umm Qseir (Hole and Johnson 1986-87), Tell Aqab, Kharabeh Shattani (Campbell 1992), Shams ed-Din (Azoury and Bergman 1980), Banahilk (Watson 1983), obsidian occurs largely in the form of blades or blade products with very little evidence of production on site (Campbell 1992). Hole and Johnson (1986: 87) suggest that obsidian arrived at these sites in the form of prepared blades.

There are sites such as Arpachiyah where interesting patterns in the access and manufacture of two general sources of obsidian have been identified. Campbell's study (1992: 154) shows that Arpachiyah received its East Anatolian obsidian directly from the source in the form of cores and manufactured them into blades and bladelets subsequently. The central Asian obsidian at Arpachiyah was received mostly in finished

blade form and often worked into bladelets. Sites such as Arpachiyah although small (at 1ha) may have been important in redistribution of obsidian to the other sites.

The site of Tilki Tepe (Korfman 1982), perhaps the closest known to the East Anatolian obsidian sources (although on the other side of the Lake Van which separates the sources and the site) would be expected to have large quantities of Nemrut Dag obsidian if one follows the argument that obsidian was an economically important exchange item. According to Wright's study (1969), however, the site has given evidence for at least three, possibly four different kinds of obsidian sources. Tilki Tepe provides evidence for the nature of contact in the Halaf Period but it doesn't exactly confirm the suggested supply-demand relationship in the capitalistic value sense. Obsidian, as Campbell (1992) suggests, may have been the only item traded over long distances in this way. Rather realistically, it may simply be the best preserved example of a much wider context within which variety of objects moved.

Kahramanmaraş is at a location that marks a major cultural and geographical divide between the Anatolian, Levantine and Mesopotamian spheres of interaction. According to Dr. Elizabeth Healey (2001), there are some interesting patterns in the production of obsidian, which may be suggestive of its re-distribution as well. For example, she suggests that its use is not restricted to merely "utilitarian" objects anymore. In the production of "non-utilitarian" objects such as extremely delicate bowls and mirrors, one may assume a type of manipulation, which linked the object to a claim on status and potentially a differential access to symbolic and economic resources.

Her analysis of the excavated assemblage also reveals that Domuztepe receives cores directly and manufactures them into artifacts. This may immediately bring about one side of the argument in favor of an emerging complexity in the social evolutionary frame: existence of such intricately crafted artifacts at a large site such as Domuztepe should indicate a level of complexity and centralization.

The differential numbers found on a variety of sites may suggest that the sites with the highest percentages, i.e. Umm Qseir, are not necessarily the most prominent sites. Long-lived sites such as Arpachiyah and Domuztepe may have received them directly as cores manufactured and redistributed them, although this does not include all potentially long-lived sites such as Tell Aqab. Sites closer to the sources may have a variety of types of obsidian both from the closest source and other ones, such as the assemblage of Tilkitepe.

Intricate reduction of blades into bladelets may indicate a social context in which obsidian was perhaps "given" to some individuals (Mauss 1967). Status item production at sites such as Domuztepe may indicate that there may be a sort of hierarchy in this "giving". Obsidian in this context may have been an object that ordered social relationships at the local level by conferring a value and status on its owner. However, this status may not be simply dependent on the individual's possession of obsidian but the society's recognition of the link between obsidian and the person. Thus, obsidian without the person it is attached to would not have meant much in terms of its value.

Obsidian could have been accessed by each family and perhaps transmitted or given to an individual of certain status (gained by initiation, age structure, marriage etc). Objects like obsidian may have structured status differentiation, link some individuals to each other and differentiate others. It may be this particular condition structured by obsidian distribution that may have then provided a commonly accepted differential access to the communal resource base.

Obsidian can be thought of as an object that gains specific values in specific understandings of community. The steady disappearance of obsidian during the 5th millennium may be related to a rational change in technological preferences after the introduction of metals. The correlation of this disappearance with development of new concepts of tenure and the material world (as will be elaborated in Chapter 8) gives an interesting angle to the problem. Objects such as obsidian emerge as artifacts reflecting social contexts within which individual and group roles were structured during the 6th millennium BC.

Seals:

"Seals" are often said to reflect evidence for the beginnings of accountability and possibly private property, which may be associated with an administratively complex exchange-based Halaf society. In her extremely influential work that explains the origins of writing in the Near East, Schmandt-Bessarat (1978, 1996) provides an analysis of the tokens, objects that may have links to seals and sealing practice, as evidence of some form of accounting or accountability which existed since the early Neolithic. According to her, the abstraction embedded in the tokens must have

identified and stored information about goods. Sealings present in the Ubaid period sites of Mesopotamia seem to provide an intermediate ground for a much more nuanced argument. For example, Rothman (1994) in amongst various researchers (Ferioli et al eds. 1994) argues that the sealings of the Ubaid period indicate the office and position of the sealer as the agent of a somewhat centralized control mechanism. The fact that most sealings are found together in isolated contexts also indicates a practice of archiving and storing information. On this note, the practice of sealing may have recorded information about the number of times a particular container or a door was opened.

In a recent contextual study of Halaf Period seals within a wider range of objects, such as the sherd and stone discs of various sizes ubiquitously found in Halaf period sites, Kielt Costello (2002) argues that the evidence to suggest that seals were in use to control access to or individual ownership of goods is not as clearly demonstrated as one would readily assume, neither in Pre Pottery Neolithic nor during the Halaf Periods. Firstly, she argues if the assumption were to be true, then one would expect to find sealings impressed by the seals, or some clay lumps with string or container marks. Besides a few exceptions that I will point to in the following paragraphs, the sealings are regularly absent in Halaf contexts.

It is possible that the lack of evidence owes to poor preservation pattern and is not a fair representation of the use and discard patterns of sealings in the past. It is important to note that the few atypical contexts where there has been a large number of sealings recovered are from the burnt, thus better preserved contexts giving support to

this argument, such as the Sabi Abyad Level 6 and Arpachiyah. While this perspective certainly remains a strong possibility, there are some other interesting patterns in the distribution of seals and sealings that may add to the ongoing discussions about these objects.

Approximately 300 sealings found in the burnt context of Early Halaf village (level 6) of Sabi Abyad is rather peculiar in this regard (Duistermaat 1996). 243 of the sealings provide clear clues about the sealed objects. At Arpachiyah in North Iraq, von Wickede (1991) notes that there are 41 sealings primarily from the burnt house (TT 6), whereas Campbell's analysis (2000) finds 27 sealings from the Burnt House. While 19 of these sealings appear to be on bullae with string impressions going through, Campbell suggests the remaining 8 were used on clay "lids". Campbell further posits that these sealings were archived in the same way to those at Sabi Abyad. At Kirbet Derak, Catherine Breniquet (1984) finds 40 sealings in a very Late Halaf context. These examples indicate that in certain social contexts archiving qualities of seals were probably in use.

Yet, can the above-cited evidence be related to individual ownership or a administratively centralized community at the sites mentioned? Even so, could an evolutionary notion of social complexity be universally applicable to all Halaf material culture bearing sites? My suggestion is that the evidence may be read to provide some clues on the changing nature of practices surrounding seal use from a practice that communicated identity to a practice that controlled property. Furthermore, this variation may have both spatial and chronological attributes. For example, it can be suggested

that Sabi Abyad's geographical location closer to the marginal zones makes its communities much more prone to the risks involved in dry farming. Use of seals to mark goods at an early stage of the Halaf period may be related to an attempt to protect the secured share under risky conditions of that particular environment.

What is interesting about the Sabi Abyad case is that the seals have been difficult to find possibly as a result of the abandonment of the village before burning. The three complete and three fragmentary stone stamp seals found in Level 4 do not bear any resemblance to the burnt village sealings (Level 6). On the other hand, these stone seals in decorative techniques are similar to the ones that are found in the Amuq, Domuztepe or Arpachiyah (Duistermaat 1996). At Domuztepe, the evidence from the Late Halaf contexts produced only a few sealings, whereas the majority of seals look very much like the ones found in Arpachiyah or Level 6 Sabi Abyad. However, it is not clear if one can link up the seal from Domuztepe to the sealing at Sabi Abyad to suggest that sealing was uniformly practiced throughout the Halaf horizon. Communities that make up the Halaf horizon can have very different climatic, geographical and social contexts.

In some contexts, such as the marginal zones, we may envision communities emphasizing the inscriptive qualities (Chapter 3) of the seals through the sealing practices, whereas in some other contexts we may expect to see that the seals primarily denoted the role and status of their owners and marked them within a group. As far as the chronological changes are concerned, while we may expect spatial and chronological variations in stamp seal use in the earlier stages of the Halaf Period,

toward the later part of the time period a more standardized and even complex form of sealing practice may have been used.

Kielt Costello suggests that general lack of sealings and seal impressions can be indicative of a lack of need for complex recording or remembering. "People may have relied on their memories and oral contracts rather than external storage" (Kielt Costello 2002: 82). In tune with Costello, I suggest that this context may have excluded any complex form of contract beyond the individual's communally recognized demonstration that he/she has this object. This demonstration may have established and confirmed his/her claim on resource and communal decisions about access. Tentatively, one may suggest that the stamp seals that fall into the interregionally comparable categories may be considered to function in multiple domains both to identify individual and mark up goods.

To further investigate what stamp seals did, we may look into the details of the decoration on them. Stamp seals found in a variety of Halaf sites fit into similar categories mainly comprising of a limited variety of designs. For example, the seals made in Arpachiyah except for the differences in local stone used in their making, would be very similar to the ones produced at Domuztepe. On a different note, the varieties of the geometric designs such as criss/cross hatches or rosettes commonly seen on ceramic painting are also a favorite of the Halaf seal makers. The symbols on seals may have their references in a much larger narrative, which was expressed on a variety of mediums, seals being only one. In this context, seals of the Halaf Period may be objects carried by individuals of certain social orders, families or groups. It may be that

highly formalized contexts (ceremonies or rituals) in which seals were distributed or used can reflect social structures and membership in the community.

In Domuztepe's case, the large numbers of seals found may be indicative of growing tensions in understandings of community and its segments in a large site. Increased variety in memory tools as Kielt-Costello suggests, such as the sherd and stone discs, may also be interesting in this regard and indicate that the entrenched understandings of community were perhaps struggling to maintain the valued traditions while integrating notions of increased need to demarcate and protect status gained by a few groups.

TT6: The Burnt House at Arpachiyah:

Arpachiyah is a very small site (1ha). Located on the prominent part of the mound of Arpachiyah, The Burnt House (TT6) reflects some importance. Some of the best-crafted artifacts known from Halaf Period sites come from the rich archaeological context of the Burnt House (Mallowan and Rose 1935). The house may have been a common storage spot for objects that were used for important occasions, events and transactions. Conventional interpretation of the house as a "potter's workshop" have been frequently cited in the literature. Campbell's analysis (2000) places the Burnt House in a different interpretive framework. He suggests that the Burnt House context chronologically refers to the abandonment of the site and the burning was intentional, probably ritualistic related to the closing-off of the site.

These symbolically important objects would not necessarily indicate the wealth of their individual owners, but rather the importance of these artifacts in structuring

contexts where important social relations take place. Deliberate burning of the house and subsequent abandonment is interesting in this regard and may indicate that the value of these objects is intricately tied with their users and the social contexts in which they were used.

I have attempted in this section to investigate whether the frequently cited cases refer to some form of emergent complexity (Arnold ed. 1996). The term "emergent complexity" injects a level of expectation into that somehow the symbolic complexity that emerged during the Halaf Period may reflect political complexity. Intricate ceramic production, seal use, distribution of obsidian objects and agglomeration in large sites indicate a dual existence that can be interpreted either as representations of an emergent complexity in a cultural evolutionary sense, or a disappearing complexity in a different realm. Multiple venues may have existed to interpret the artifacts in the past just as in the present, ultimately creating the tensions that opened the way to shifts in the path of prehistoric change. I suggest that the term emergent complexity may be elaborated to indicate emergence and perhaps decline of a type of complexity that emphasized the "incorporating" importance of artifacts rather than the "inscribing" qualities (Chapter 3). I believe it is at this juncture that the material culture of the Halaf Period resides with potentials to underline a multifaceted process of change.

My specific goal is to examine the settlement patterns in Kahramanmarash to discuss factors effecting temporal continuity and spatial congruence of sites (Dewar 1991) from a variety of perspectives including the ritual factors as well as external influences of climate and environment. In fact, this examination is hoped to open up

new venues of inquiry into the exploration of culturally specific significance of long-term use of a site in the typically mobile social landscapes of the 6th millennium BC. Through a review of the recent landscape theory in Chapter 3, I argue that the currently widely used methods of regional analysis may be hindering a deeper understanding of the culturally significant links between the places, people and the artifacts. The proposed theoretical approach may be particularly useful for the 6th millennium and allow us to introduce a more satisfactory frame to inquire the practical question of this study, i.e. to understand the site size growth, repeated targeting and eventual abandonment of certain places, such as Domuztepe in decentralized social systems.

Chapter 3

Theoretical Issues

Landscape and Social Order

There is a wealth of review literature published that particularly explores the evolution and usage of the term landscape in archaeology (Goudie 1987, Crumley 1987, Wagstaff ed. 1987, Bender 1993, Bradley 1993, Gosden and Head 1994, Tilley 1994, Hirsch and O'Hanlon eds. 1995, Groth and Bressi eds. 1997, Wilkinson 2000, Anschuetz 2001, Thomas 1996). In particular, such richness in literature should reflect the controversy surrounding the usage of the term and a search for a basis that could bring different branches of archeological research under a common umbrella. While this may be the general wish among the archeologists, landscape archaeology is currently an arena of heated debates in which the term "landscape" is used to express fundamentally different perspectives and methods of archaeology. This chapter intends to emphasize a particular branch of theory and approach to landscapes, which underlines the perspective of the dissertation, rather than providing a deep history of approaches to landscapes in various traditions of archaeological research.

As Tony Wilkinson states (2003, 1), "the term landscape has become increasingly popular in the last twenty years, and so its meaning has become stretched well beyond what was originally understood." The term landscape in archaeological discourse is often used to denote natural environment as a container within which cultural activities of settlement and subsistence take place. This usage assumes an existence outside of human experience of the natural environment, which may be rooted

in the traditional scientific archaeological emphasis on material evidence that constructs a vision of prehistoric people interacting with the natural environment in an economically structured input/output feedback mechanism.

Tilley has recently discussed implications of such archaeological representations of landscapes in the concept of "paper landscapes" (Tilley 2001). Paper landscapes are chronologically ordered static layer maps of archaeological site distributions within their environmental resource context. Distribution maps constructed through this vision are often used tools in archaeological analyses through which transitions from one step in social evolution to the next can be captured and identified. In return, such representations of landscape as a unidirectional progression of temporal cultural entities reduce the dynamism embedded in local histories of settlement making and the structuring principles of social order behind the pattern.

Some researchers (e.g., Thomas 1993, 26) argue that emphasis on material evidence blurs the dynamic social context that interconnects and imbues significance upon that material world. In this context the term landscape refers to a "pattern which connects" human experience with particular places. Cosgrove argues "landscape denotes the external world mediated through subjective human experience" (1985, 13). Landscapes are not necessarily synonymous with natural environments (Anschuetz et al. 2001) but are synthetic with cultural systems structuring and organizing peoples interactions with their natural environments (Ingold 1993, Jackson 1984). In Tuan's definition (1977), landscapes are products of cultural worlds, in that through their daily activities, beliefs and values communities transform physical spaces into meaningful

places. Accordingly, landscapes are not the same as the built environments we see but they represent a way in which people perceive themselves and their world through their relationship with their surroundings. Through this activity, they underline and communicate their own social role and that of others with respect to places (Cosgrove 1985, 15).

Anschuetz et al. (2001, 161), notes that "landscapes are dynamic constructions, with each community and each generation imposing its own cognitive map on an anthropogenic world of interconnected morphology, arrangement and coherent meaning". Because landscapes embody fundamental organizing principles for the form and structure of people's activities, they serve both as a material construct that communicates information and as a kind of historical text of cultural process.

Transformation of landscapes is often linked with a change in social order. On the other hand, ancient sites or monuments may be transformed and re-used as people encounter and interact with particular places as they re-create the past (Bender et al, 1997). Thus, through physical modifications, experiences and memories, communities generate a landscape of cultural product. In this process, a group's landscape concept becomes a key element that provides the community with a particular sense of time and place. This sense helps to organize the structure and pattern of their occupation of certain areas and their use of larger physical environments.

Landscapes, Ritual and Mundane

Fundamental concepts that underline and structure people's view of the world are represented in action and include mundane everyday matters. Thus, we can expect people belonging to communities interacting with their environments to define and mark their occupation of physical spaces in patterned ways of residence, subsistence and other activity. Ritual landscape studies build on an examination of patterns in the spatial distributions of both mundane and ritual features in relation to each other. Rapoport defines (1999, 35-36) ritual landscapes as the products of stereotyped actions, including specific acts and sequences of acts that represent the socially prescribed orders by which communities define, legitimize and sustain their occupation of their traditional homelands.

It may be useful to redefine the term ritual here as the term is conventionally used to denote highly formalized non-functional human behavior. On the other hand, by utilizing the concept of ritualization, Bell's work (1997) suggests that ritual can be viewed as a variety of routine practice. The variety can be measured in relation to the intensity of elaboration and focus given to the preparation of place, attention to formality and scheduling. The place of ritual is usually assembled according to practices that evoke familiar traditions, express meaningful ethos and reflect specific community structure. Evoking a history of practices and beliefs requires a place as context that is different from other places and uses.

Both public and private rituals are usually performed according to a schedule. This periodicity facilitates the assembly but also helps differentiate the activity as

deliberate and meaningful in comparison to other activities. As the degree of formality and attention to rules increases in a social context, we understand that emphasis on performance or appeal to traditions increases. This appeal is an indication that the authority and forces shaping the occasion lie beyond the immediate control or inventiveness of those participating in ritual (Bell 1997). Effects of ritual depend on the degree of people's involvement, the amount of ritual repetition, the degree to which the values are exposed in the deep structures of the ritual are reinforced in other areas of social life.

Bell's definition of ritual fits remarkably well with the recent visions of landscape in archaeological discourse, as both concepts emphasize the analytical constituents of the degree of variability in the overall pattern of human behavior in terms of repetition and emphasis given to certain acts. In the encompassing view of the landscape, we may imagine people moving between places through their lifetime in an overall act of ritual that connects these places and people and constructs a historical biography of both. In this context, the meaning and value of various places where different degrees of mundane or more formalized acts take place can be envisioned to be constructed in deeply rooted beliefs and principles of social order and understandings of "community".

The dissertation employs this understanding of landscape and community to the permanence (temporal continuity) and population attraction (spatial congruity) represented in some of the settlements in the context of wide spread mobility of the 6th millennium BC. Connection of people to particular places in a mobile and socially loose

environment can be suggested to represent an importance attached to these places. In this respect long-term focus signals the social significance of place for the communities under examination.

Structures of the Connecting Pattern: Previous Approaches

Recent archaeological approaches to the Near Eastern Neolithic have been concerned about understanding the structuring principles that created the patterning we observe in the archaeological record. Although the methods have not been employed at a regional settlement scale of analysis yet, certain structuring principles of the Neolithic period material patterning have been put forward.

For example, the last 10 years has seen a considerable interest in new interpretive frameworks to explain the "Neolithic Revolution" (Hodder 1990, Cauvin 2000, Kuijt 2000, Verhoeven 2002). Specifically, the pre-pottery Neolithic (PPN) period with its rich symbolism and imagery from spectacular sites such as Gobekli tepe and Nevalı Çori (Hauptmann 1999, Schmidt 1999, 2000), when considered together with previously known sites such as Çatalhöyük (Mellaart 1967, Todd 1976, Hodder 1996) and Çayönü (Braidwood et al. 1981, Redman 1978) suggest that the Neolithic process may have followed complex routes in ritualized landscapes.

The structural duality in concepts of female and male has been observed to have generated an ongoing tension between the taming and nurturing qualities of female against virility of male, constructing a process of domestication and settlement in the face of the wild (Hodder 1990, Cauvin 2000). Such a tension in gender relations is

suspected to have reproduced a new link between animals and humans as well as between plants and humans continuously reordering the space and social order of the Neolithic societies. This is no doubt an over simplified view of the highly varied mosaic of processes during the Neolithic Period, yet it provides a methodological point that paves the road to the methodological and interpretative stance taken in this study.

More recent studies focusing on the Neolithic ritual activity suggest that rituals of the period may have been structured around a field of concepts rather than one structuring principle. These concepts may have formed a relational field and specific elements of this field may have been emphasized in different places depending on the focus of the ritual gatherings (Kuijt 2000,Verhoeven 2002). For example, Verhoeven's (2002) analysis of a range of pre-pottery Neolithic sites in the Near East argues that places of human inhabitation represent outplay of various ritual practices embedded in the mundane life-cycles of social groups. Through a comparison and contrast of activities represented in various spatial contexts, Verhoeven constructs a ritually linked and ordered image of life and distinguishes between household and public rituals structured around principles of communality, symbolism related to domestication, vitality and human-animal linkage. He suggests a three-fold site differentiation structured by these principles:

-Normal, domestic sites where conspicuous ritual objects such as ritual buildings or large statuary were absent,

-Settlement sites where ritual buildings, large statues were present at site such as Ain Ghazal, Nevalı Çori and Çayönü,

-Special ritual sites with no or restricted domestic activity such as Göbekli Tepe and Kfar HaHoresh.

While some places such as Göbekli Tepe appear in this analysis as removed from daily life in the plains and may reflect the meeting of communities in infrequent but important occasions, some other places such as Ain Ghazal or Çayönü may represent places where rituals related to cycles of local community can take place, such as marriage, death, birth, agricultural events. Sites without such spectacular visibility of ritual on the other hand may have been still connected to this wider conceptual landscape in various ways.

Obviously, such a three-fold site differentiation may not be applicable as a template. The sites that Verhoeven analyzes are geographically quite far from each other to make a meaningful compilation for a supposed PPNB culture. The differentiation may well be based on particular local social and historical trajectories. On the other hand, the structuring principles Verhoeven proposes may be applicable as a field with varying degrees of emphasis in different communities. The landscapes of PPNB period communities in this regard can be envisioned to be highly structured within a network of ritual and residential areas continuously structuring action and ensuring continuity in differential ways.

On a more profound note, Schmidt (2000) argues that the ritually important site of Göbekli Tepe was repeatedly targeted since the Mesolithic throughout the pre-pottery Neolithic period for confirmation and sealing of various social relationships rooted in the Mesolithic hunting-gathering contexts. Use of the megalithic structures at Göbekli

Tepe, memorialized these social contracts and transmitted important information on the long-term history and nature of the community formation to the future generations.

According to Schmidt, it was the fixation and repeated use of places such as Göbekli Tepe, in a fluid landscape of Mesolithic hunter-gatherers that constructed the first seed of the Neolithic Process in the Near East, long before the concerns of agricultural dependencies shaped the life-styles of the Neolithic populations. Places of the Neolithic, whether they are settlements, short-term occupations or centers of ritualistic gatherings, were instrumental in the formation of communities. In time they became synonymous with the communities using these places. In this regard, a Neolithic "process" can be framed in terms of a gradual emergence and local variations of spatial configuration and fixation in landscape (see Mizoguchi 2002 for a similar argument concerning Japanese prehistory). In return, the variations in representation we see on the physical landscape are linked to the particular understandings of the material world and social relations.

The 6th millennium BC landscapes and society do not give as elaborate and clear examples of ritual structures, which in and of itself must be a reflection of the nature of community formation. However, the mundane movement vs. fixation as represented in the settlement patterns of the Halaf Period can be reconsidered within the context of the ritual landscape studies. In this regard, the long-term persistence of certain occupations in the context of short-lived sites may serve to understand variables of a long process of change that may have started as early as the Mesolithic.

Past, Present and Future in Tradition

Besides the tensions between female and male, domestic and wild, a much deeper structuring principle of the Neolithic Period has been discussed under the concept of ancestral links. An important evidence to understand the social context of traditions appealing to ancestors has been observed in the mortuary practices of various early Neolithic societies in the Near East (Kuijt 2000, Rollefson 2000). On the other hand, in a wider context of recent anthropological and archaeological research, it has been argued that the term "ancestral" refers to a need to understand and interpret the past, which is a common element in all human societies.

Moreover, the representation of ancestral links is not merely to be found in analysis of burial practices but also in the analysis of structured deposition of a variety of artifacts, including settlements. According to this view, spatial configuration, construction or destruction of built environment reflect people's construction of time, their relative understanding of the past, present and future, and the power hierarchies embedded in the cultural construction of worlds (Edmonds, 1999, Mizoguchi 1993, Bradley 1991, 2002, Gosden 1994, Thomas 1996).

In fact, through the latter view of the ancestral links, it may be possible to reveal a deeper structuring context for the rather simple interpretation of the Neolithic as a process of struggle between male and female, wild and domestic. Neolithic studies focusing on the structured deposition in the topic of "the social life of artifacts" (Appadurai 1986, Tringham 1995) frequently mention the central role of material culture in aiding the communication and transmission of cultural knowledge to be

adopted into historically situated circumstances. In this approach, the objects and built environment are not seen merely as symbols, but envisioned through their active materiality capable of perpetuating specific forms of cultural continuity and change (Connerton 1989, Rowlands 1993). For example, the ephemeral forms on the landscape on the one hand and forms such as monuments, with an intention to remain beyond time on the other hand are thought to have constructed a dynamic conceptual field that structured people's understanding of the depth, nature and power of history.

Continuity and Change

In this section, I review the analytical and interpretive dimensions of research that attempted to reveal the construction of time and social power forged via structured deposition of built environment. This review lays the foundations of a new approach to read the landscapes of tells as cultural artifacts, which I will explore in the next section of this chapter. The works of a few researchers can be instrumental to interpret the structured deposition of places as cultural artifacts. This framework explores the patterned deposition of material culture from the point of view of its significance as a style of cultural inscription, transmission and social transformation (Barth 1987, Goody 1986,1987, Gosden 1994, Küchler 1987, Wilson 1988, Rowlands 1993). For example, in a simplistic nevertheless revealing framework, Wilson (1988) envisioned "pre-domestic" societies as living in an unarticulated historical trajectory relying on myths of a founding time in the past, disinterested in mapping out origins of individual or group histories. In contrast to this, Wilson argued that "domesticated" societies used geometry and diagrams to construct a cyclic, seasonal notion of time existing alongside a

conception of progression from the time of ancestors to the present. In a similar yet more articulated vein, Goody (1987) suggested a contrast between the particular uses of material culture and role of memory in non-literate societies to that of literate societies.

Küchler (1987) on the other hand, focused rather on the relation between the form given to an artifact (in my case places of settlement) and the process of its transmission. According to Küchler, the distinction should be searched in the way an artifact is passed from one generation to another as opposed to deliberately lost or destroyed. In the latter technology, human memory would be fundamentally important to recall while in the former, the material would objectify knowledge and memory. Furthermore, the latter encourages greater variation whereas the former would favor more rigid transmission of information.

Following Küchler, Connerton (1989) suggests a useful terminology for distinguishing two fundamentally different methods of cultural transmission: inscribing vs. incorporating practices. In an inscribing practice, the link between past, present and future is made through the material. Artifacts of durable kind assert their own mnemonics, their own forms of commentary and therefore come to possess their own personal trajectories (Kopytoff 1986). Memorials, durable forms such as monuments are part of the material culture of remembering whereas activities such as destroying, abandoning and burying are all acts of forgetting. Through such acts integrity of the living (sense of community) is assured in fundamentally different ways. For example, durability and permanence in material (or place for that matter) is conceptualized as

belonging to an eternal and unchanging order, a position of authority (Bloch and Parry 1982: 11).

In the incorporating practice, places or things become memorialized rather than standing for something particular to be remembered (Rowlands 1993). Artifacts, abandoned, destroyed or taken out of circulation, such as in a burial ceremony become a memory in their absence. The opportunities for manipulating the possibilities or repetition are therefore abolished in an act of sacrifice or destruction that severs connection with its original status. This suggests a very different relation between memory and representation, as objects cannot function to aid memory. Thus, they are not made with a view towards the past, but towards the future (Küchler 1987). They do not embody memories of past events but have themselves become embodied memories.

Incorporating practices appear to stress the goals of reproduction rather than production in which very different conceptions of the relation between person and things can flourish (Strathern 1988, Rowlands 1993). In Mauss's terms things are never completely separable from the persons who exchange them (Mauss 1967). Gregory (1982) envisioned this difference to be between the class-based economies and clan based economies. In the class based economies production and objectification, i.e. making of commodities is the main drive, whereas in the clan based economies the self-replacement of people and personification dominates.

Rowlands (1993) argues that the conservative transmission is likely where people are exposed constantly to highly visible examples of material objects invested with authoritative credibility. Inscribing practices use logically highly integrated

repetitive discourse such as verbalization that also fosters to disseminate knowledge as transportable ideology. Incorporating practices depend on iconic symbolism, the avoidance of "exegetical commentary" and the rigorous observance of secrecy and exclusion (Rowlands 1993). Two intermediate situations were suggested:

1. Where ephemeral material forms are found, we may be witnessing an attempt to overcorrect transmission in order to keep meaning constant.

2. Where continuity in form is emphasized (rather than continuous correction), the meanings can be expected to change through time.

From Artifacts to Places:

Bender and Wellbery (1991, 4) introduce the same issue from the perspective of cultural constitution of time under the concept of "chronotypes". Chronotypes are models or patterns through which time assumes practical or conceptual significance; they are themselves temporal and plural, constantly being made and remade at multiple individual, social and cultural levels. They interact with one another, sometimes cooperatively, sometimes conflictually."

Employing the above discussed concepts, for Bulgarian prehistory Bailey (1993) argued that the Neolithic and Chalcolithic societies were driven by two chronotypes, one cyclical and the other linear. In some instances these chronotypes stood in opposition to each other (e.g. agricultural and animal breeding cycles of reproduction vs. linear record keeping) while in others they combined in a single part of the archaeological record (e.g. tell settlements) to drive strategies of both chronotypes at the

same time. According to Bailey, the linear chronotype was one of two major strategies driving social action since the beginning of the Neolithic. For example, construction of continuity in space (linear) that was ordered by practices surrounding burial (cyclical) constructed the tells of Bulgarian prehistory. This action recorded inherently cyclical nature of human lives in a permanent medium of space, storing and displaying information for successive generations to come.

An interesting idea in Bailey's argument is related to the abandonment and reoccupation cycles of inhabitation. In the seasonal abandonment, reoccupation and rebuilding of tells, habitation is guided by the cyclical chronotype. On the other hand, the linear chronotype drives the longer term use of the multi-layered tell, conspicuous in the landscape, as a marker of the place which a particular community identifies as home (discussed in more detail in the next section of this chapter).

However, a major transformation culminated during the 4th millennium BC in Bulgaria as result of changing social practices. During the Chalcolithic, production of primary and secondary products increased. In turn the importance of adherence to the cyclical chronotype increased. At the same time, however, commitment to a linear, historical perspective intensified as major effort and wealth (gold, copper, shell and bone jewelry in burials) were invested in maintaining social continuity beyond the biological limits of life-cycles. At the end of the Chalcolithic and in Early Bronze Age, burial itself also changed from settlement associated to isolated small groups of mounds covering usually single male bodies. Much of the symbolic material culture changed toward a more controlled usage of symbolism. Sherratt (1983) substantiates the

argument for a shift in perspective from an inward looking to an outward looking and exchange based society behind the transformation of the 4th mill. BC.

It is important to note that Bailey identifies the nature of change not as a sudden break or major transformation but as a shift in the relative importance of the linear and cyclical chronotypes from Neolithic/Chalcolithic to Bronze Age. Both existed side by side since the beginning of the Neolithic and the changes we observe in the archaeological record during the 4th millennium BC correspond to shifts in importance rather than major and sudden breaks.

Reading the Tellscapes

In this section, I develop an approach to read the landscape of 6th millennium BC, based on the discussion above. This approach intends to articulate the patterns of temporal continuity and spatial congruity from the view provided by the analysis of structured deposition. Multi-period mounded occupations called "tells" in Arabic, "magoula" in Greek, "tepe" in Persian or "hoyuk" in Turkish are an inseparable feature of the prehistoric Near Eastern landscape, from southwest Asia to southeastern Europe, indicating a wide-spread distribution of common traditions of settlement making. To the modern eye, tells appear to have a mundane existence and do not appear to deserve much attention other than the fact that they make it easy to find a site of settlement. They are neither as spectacular as the monumental structures of the British Neolithic nor are they temples of the classical landscapes. Yet many surveyors at least for a moment wonder about how the tells have become. How did this peculiar deposit

formed in time on previously unoccupied Neolithic soil? In a time period when sites are usually small and scattered and mobility is an option, why should people settle in certain areas for such long periods of time as some substantial deposits suggest? What were the underlying factors behind selection and especially repeated occupation of these locations? What is the significance of the maintenance of settlement specifically in the context of wide spread mobility?

Tells are traditionally seen as primarily human induced geomorphological processes of formation and described so (Rosen 1986). Very often the primary explanation asserts that tells are settlement sites that formed through traditional ways of making houses in the Near East with mud brick or pise (Sherratt 1983, Roaf 1990). The use life of mud brick is short and when its use life is over, the following generations build new structures over old ones. The choice of location is often seen to be related to the economic resource base which could allow a population certain size to exploit the environment for their basic needs of subsistence. It is understood that through a complex interaction of natural and human induced processes, in time the modern tell deposit forms.

Whereas this view provides invaluable perspectives on a facet of human existence, it may hide other facets that may have been equally important in place selection and maintenance. It is important to remember that all tells represent some form of occupational deposit. Sherratt identifies two important elements in tell formation: a high degree of locational stability and the concentration of houses into a coherent unit (Sherratt 1983). For a detectable occupational deposit to form, there

should be at least a few generations of occupation in the same place, continuously building dwellings on top of each other within a geographically circumscribed location. Considering that there must have existed plenty of space to spread the settlement, this peculiar activity of settlement appears rather peculiar to some North European Archaeologists (e.g., Bradley 2002).

Recently SE European archaeological research has been tackling issues concerning size and occupational histories of tells (Chapman 2000, Halstead 1999). These studies assert that tells are artifacts deposited during structured human action. If the construction of space reflects people's historically situated understandings of social identity (Pearson and Richards 1994), then tells as unique artifacts of this process reflects an effort that created and secured a memory of routines that formed the fundamental understandings of social identity. In the case of a tell, continuous manipulations of a restricted space of settlement may have been the focal point that socially and geographically located group history and tradition. In this understanding of the settlement space, locations of houses, burials and other tells or transitory occupations must have served as a continuous force to structure social action by steadily sending implicit messages about the ways to behave and exist in the world.

An Interpretation of Temporal Continuity:

At a different level, by blurring the divide between monumental and mundane, it may be possible to appreciate the significance of the Neolithic Period tells in the Near East. In a contrast of the landscapes of monuments to landscapes of tells, it can be observed that tells themselves are monuments of a much subtle but just as substantial

ritual of life. Firstly, as Bradley (2002) noted, tells rather obsessively develop within restricted space, in a similar fashion to the repeated building activity in the British monumental context. In fact, many of the henge style monumental structures apparently started as relatively ephemeral but ritually patterned pits that could be hardly called as monumental if found with no successive phases of activity.

Considered from this perspective, the analytical difference between the ordinary residential tell and the ritually important monument emerges as a variation in the degree of emphasis given to the preparation of the place and the formality of behavior. The fact that the tells and tell-to be places (Chapman 2000) were inhabited daily, whereas stone monuments were not lived in regularly, implicitly attaches a utilitarian function to tells ultimately hindering the subtle significance approaching in importance to that of monuments.

This understanding has important implications for method building. In tune with the interpretive frameworks for explaining British circular monuments, some researchers (Chapman 2000) note that the development of tells, i.e. the long term emphasis in a restricted area of settlement during the Neolithic should be considered in the context of ancestral spaces, crystallization of an unfolding social history via a specific adherence to the past.

The development of a tell starts with a flat site. Following this the area should be consistently occupied to produce a recognizable accumulation of deposit (Chapman 1990). As the occupation continues through generations, upward accumulation of deposit structures the space of settlement. A deposit becomes a landmark perhaps after a

few generations of successive occupation in the same location. Tells then can be viewed as representations of continuity through successive linking with ancestors who once lived in the same space. In practical terms, this suggests that continuous occupation on a restricted space signals the importance of genealogical links to the past that serves to order social relations around centrality of descent.

Tells grow higher as a result of a long history of occupation in restricted space. Following the argument that the occupation of a tell provides a "genealogy" attached to a fixed locale, then the higher the tell, the more legitimate and respectable the claim to a particular space of the settlement by a certain group. As a matter of fact, if this suggestion reflects some truth then the more important and chiefly recognized feature of a tell to an individual of the time might have been its height not its size (Halstead 1999).

An Interpretation of Spatial Congruity:

Chapman (2000) recently noted that the choice of a tell-to-be would depend on some sort of social cohesion at the level of the acceptance of a past history of social relations and place myths, in which the chosen place is embedded. In the volatile environment of mobility and segmentation, tells-to-be would be interdependent upon communities-to-be in a social network of flux and instability.

Particularly, he suggests that the selection of a place in preference to others refers to specifics of the places' *mythology and myths*. These may not be recoverable archaeologically but follow discernible principles.

> "Differentiation of places already related in a network of narrative can lead to the occasionally unanimous decision amongst a group of the selection of a single special place. Once this place becomes a time mark in the settlement cluster, its place value and place myths dramatically

> change, offering an important social resource which can be activated in the future through continued site occupation or reoccupation. Once a tell mound emerges, there are different social conditions surrounding its later biography. The continued occupation of a special place is a matter for negotiation and consensus. Despite the weight of ancestral tradition there can be breaks and abandonment." (Chapman 2000, 123)

Often used structuration theory holds that "the structural properties of social systems are both the outcome and the medium of practices that constitute these systems" (Giddens 1979, 69). This construct refers to recurrent patterning in the way people do things and relate to one another across the dimensions of space and time (Giddens 1984). Symbolic capital in this approach refers to how meanings assigned to artifacts are critical to the way individuals structure their world. In this context manifestations of material culture situated in particular places is perceived as product of social action and belief system that order social life (Bradley 1993, 1997, Bender 1993, 1998).

In this context, it can be suggested that the growing deposit of tell becomes a material culture to be proud of as an artifact of value, a resource to be used in social negotiation. The concentration of value in these places acts as an attractor for various kinds of social interaction whether visits, exchange and ritual. The *meta-narratives* that connect certain places to people, places and objects, such as ancestral myths, can be stable and continuous even when people move (Morphy 1995). Thus, an increasing success of place takes place. This success may also be short-lived, because of the social tensions arising out of differences between traditional and new concepts in context of increased communication flow. The

meta-narratives can change when social groups die out or when new practices imply and forge new connections to connect people, places and objects.

Social Significance of Tell Style Settlement

One may wonder what significance the tell type occupation may have had in the lives of the 6th millennium BC communities who chose to represent continuity in certain locations rather than elsewhere although clearly mobility and movement was perceived. In the previous pages, I discussed the material cultural practices emphasizing incorporating vs. inscribing qualities of artifacts and the implications of such practices on understandings of time and social formation. In this context, I want to highlight Bradley's recent contrast between the "horizontal stratigraphy" of long house tradition in Northern Europe vs. the "vertical stratigraphy" of occupational mounds in the Near East (Bradley 2002). In the former, as the houses were built and abandoned, the new ones would be placed in close association but not on top of eachother. In contrast to mounded occupations, this activity inscribes the history of a particular household on the landscape and suggests a social practice with a different vision of time and identity. Continuity, in this case would have been traced through a visual interaction with the abandoned house history continuously shaping the nature of social formation. This social formation may reinforce a long-term understanding of the individual history of a household rather than an emphasis on the larger community, as may be the case with the mounds.

As with the patterns of use, deposition or destruction of artifacts, there are patterns in the construction of landscapes that reinforce particular constitutions of time. The acts of remembering and forgetting, such as temporal continuity of place or its abandonment, manifest themselves in different contexts and are continuously in active involvement with structuring of history in peculiar ways. In the Mesopotamian case the visual continuity of a community during the late Neolithic would appear to be vested in a particular location at the expense of the individual household in the long-term development of settlement. While this appears as a collective representation, there are more complex patterns that create the spatial congruity of a site and these patterns can be highly varied. Specifically the spatial configuration of burial and embeddedness of mortuary practice in nested time-frames of daily life may have been vital to the reproduction of continuity both at segmentive and communal levels (Chapter 8).

On this note, Stevanovic (1997) has recently argued that the Bulgarian Neolithic traditions of house construction and abandonment may have been performed within a vision that foresaw the cycles of life of the social group living in the house. In her research in Opovo, she has argued that the houses would be constructed to be deliberately burnt before abandonment, potentially associated with death of some occupants on the ancestral line. Specifically, the burning associated with house abandonment in most Neolithic Bulgarian tells suggests the existence of deeper links between the artifacts and people. Accordingly, the landscape of human inhabitation can be viewed as an organic entity that is/was reproduced through such traditions embedded in people's mundane acts of living.

Community: from Conceptual to Operational Scale

Having advocated a move beyond ceramically defined cultures to a landscape of human experience, identification of social groups as creators of this artifact is necessary at an operational scale. On the landscape level methodological focus on longevity to define an inherently mobile landscape is approached in the concept of community. Considering that evidence for this landscape analysis mainly come from regional survey collections of often geographically defined settlement sites, the concept of community needs to be grounded at a well integrated geographical and social operational scale.

From an analytical perspective, the concept of community can be approached as a value or as a descriptive set of variables. As a value, it is associated with elements such as solidarity, commitment, mutuality and trust. As a descriptive set of variables, its existence can be measured in relation to place, interest and communion (Frazer 1999).

Place community has a shared element of geography: a locality while a common characteristic other than place, such as religious belief, sexual orientation, occupation, ethnicity bring together non-place or interest communities (Hoggett 1997). Communion represents a sense of attachment to a place, group or idea. It is similar to spiritual union, profound encounters in communal rituals and meetings.

In any approach, these will merge and intersect in complex ways. Cohen's work (1982) of belonging and attachment is important. He argues that communities are best approached as communities of meaning. Community lays a crucial symbolic role in generating people's sense of belonging (Crow and Allan 1994). People construct

community symbolically, making it a resource and repository of meaning and a referent of their identity (Cohen 1985).

Cohen argues that "community" involves two related suggestions that the members of a group have something in common with each other; and the thing held in common distinguishes them in a significant way from the members of other possible groups. Thus, community implies both similarity and difference. Boundaries of community exist in the minds of the beholders. As such, they may be seen in very different ways not only by people on either side, but also by people on the same side. The defining of boundary places some people within and some beyond a community, thus it can become exclusionary. The benefits of belonging to a particular group are denied to non-members. The nature of relationships between people and the social networks of which they are a part that is often seen as one of the more significant aspects of "community". Social networks help one to build a sense of self and enable one to navigate socially around the demands and contingencies of everyday living.

In archaeological literature, communities are sometimes defined around some central feature such as a site (e.g., Domuztepe community) or region (e.g., Kahramanmarash community), or a culture historical category (e.g. Halaf communities). It is generally understood to be a smaller and a local scale observation, very often used to study fringe groups to central sites. Such studies equate communities with the geographical scale of observation. Consequently a more social scale of self-identification of community and its dynamic involvement with the space it creates can be missed.

An understanding of community centered on social organization is also employed to move away from the geographical scale. Specifically speaking, territoriality emerges as an important aspect of community's representation on the ground. The concept of territoriality is often assumed in the context of ownership and tenure of land in agricultural production. Site catchment studies epitomize this understanding. A community then emerges as the group of people who are tied through the organization of agricultural production.

A community's involvement with land however cannot be simply assumed as an agricultural one. Very often this notion is acknowledged but in an essentializing understanding of descent relations in an ill defined context of "tribal" systems. In this view access to land is seen as linked to descent relations to reproduce the land tenure systems. A more socially informed landscape approach to regional analysis has been put forward to integrate manifestations of all kinds of cultural activity (Crumley and Marquardt 1987). Thus, it has been acknowledged that a site-level analysis does not have an inherent connection to community, although it is part of the social activity on the landscape.

For the case of Domuztepe and in general Neolithic sites of the Near East such links between territorial agricultural production and community are difficult to argue. The tell spaces show that it was important to maintain a restricted residential space, however the links of this insistence on a locale with ownership can not be successfully shown. The kinds of access and ownership for a landscape of co-existing mobility and longevity such as the 6th millennium BC settlement pattern of Kahramanmaraş is

difficult to interpret and requires closer understanding of patterns of movement at various scales of analysis from regional to micro-regional to intra-site contexts. In order to understand the process and scale of mobility, there needs to be a good chronological framework that can satisfactorily be used to identify frequency, range and abruptness of abandonment and reoccupation cycles. Therefore, this study opens up with a proposal for a chronological framework in Kahramanmaraş region. This framework is concentrated on the 6th millennium BC. The site of Domuztepe provides the detail for the Late Halaf assemblages. Therefore, the developments leading to the abandonment of this site are better understood at a regional level.

Methodologically, the analysis depends upon revealing various degrees of related group history through the factors of *temporal continuity, spatial congruity, contemporaneity* (Dewar 1991), *residential proximity, regularity of interaction and shared social identity* (Murdock 1949; Murdock and Wilson 1972) through time. In archaeologically recognizable terms, a house is the unbreakable unit with the highest degree of interaction and represents a group of people tied via specific concepts of family history. Households in return, can form a small community with a high degree of related group history. Interaction on a very frequent day-to-day basis can be assumed. The community formation can attest itself as a single site or a cluster of sites within a particular zone. The latter representation may geographically develop within a relatively dispersed or equally rather congruent pattern, each of which reflecting a particular style of social formation. The terms micro region or locality are used here as focus of such community activity. Sites of such a community are expected to be closely associated in

space and present a coherent picture of temporal continuity and complementarity in their dateable artifact assemblages.

In practical terms at Kahramanmaraş, it is suggested that households can perform various strategies of mobility, some remaining within restricted space and some utilizing a wider range within a micro zone. Sites of a residential community can form within an area of 1-2 km distancing while maintaining a location where temporal continuity is emphasized. These localities are key to approaching settlement history while spatial demarcation, distancing, depth of deposits and visibility are keys to understanding the order of social formation.

Region is perceived as a socially arbitrary yet geographically definable division. As a geographical divide, communities inhabit it with some degree of comparable history perhaps sharing broad environmental influences or very remote genealogical links. Specifically in Kahramanmaraş, the survey region is visibly divided into three geographical zones and the prehistoric communities historically inhabit only certain parts of these zones making social divisions correlatable with the geographical ones. However, these are not identified as territories but rather artifacts of the history of social formation.

Accordingly, the study examines potentials to explain nested spatial and temporal scales of mobility (intra-site, micro-regional, regional in a diachronic perspective). It suggests that while the 6^{th} millennium micro-regional mobility may be related to subsistence practices, repeated use of some locations and a study of their intra-site patterns of residential mobility reveal more substantial concerns with

preservation of biographical continuity of communities. What kept individual segments to these localities in an inherently loose social environment was the significance of these places in maintaining and preserving people's sense of time, space and identity. The transformation observed during the latter 6th millennium BC (Chapter 5) may be related to shifts in the fundamentally important understandings of social formation. The culminating shift in the latter 6th millennium BC, as will be argued in Chapters 7, is also represented in the changing patterns of material culture and social practice.

Chapter 4

Prehistoric Ceramic Chronology in Kahramanmaraş Region

Although it is not this dissertation's ultimate aim, a chronological framework for Kahramanmaraş Region needs to be constructed so that a discussion of various patterns of mobility along with Domuztepe's abandonment can be placed within a regional framework of settlement development. In order to achieve this goal the first part of the chapter presents a brief sketch of the physical environment of the Kahramanmaraş Archaeological Survey Region followed by a bibliographic outline of the history of archeological research conducted in the area and surroundings for the purposes of establishing a comparative framework. Then, I present prehistoric ceramics from the survey collections and propose a regional chronology.

The Kahramanmaraş ***Region***

Kahramanmaraş is located at an intersection between the Levant, Mesopotamia and the Anatolian plateau. Plains that are the subject of the UCLA Kahramanmaraş Archaeological Survey Project are located in the southern portion of the province, which marks the northern end of the long Levantine rift valley system (Garrard et al.1996). Adıyaman and Malatya neighbor the province in the northeast, Gaziantep in the southeast, Adana in the southwest and Kayseri and Sivas in the north. Ahır Mountain (2342m) marks the northern border of the survey area and also separates the lower basins of the Kahramanmaraş district from the highlands of the Elbistan province in the north.

The Kahramanmaraş region is technically not within the limits of Northern Mesopotamia, described as the catchment of Euphrates and Tigris. While the channels and rivers of the Kahramanmaraş region are within the catchment of the Ceyhan rather than the Euphrates, channels joining the Euphrates start immediately to the south and east of the survey region. The northern one called the Karasu passes through the Araban Ovası and reaches the Euphrates around the Kurban Höyük area, south of the Atatürk Dam. Another one is the Çanakçı Deresi that passes by Tell Turlu in Gaziantep province before it meets the Euphrates.

The Erkenez and Aksu rivers join the Ceyhan River immediately to the southwest of the modern city of Kahramanmaraş and flow into the Mediterranean in the Adana area. This might have been one way of connecting the region to the prehistoric settlements of the Mersin; the other route passes through the Bahçe Pass to the southwest of the survey region. This seems to have been a more important passage connecting the southern basins of Kahramanmaraş to the Adana and Mersin area.

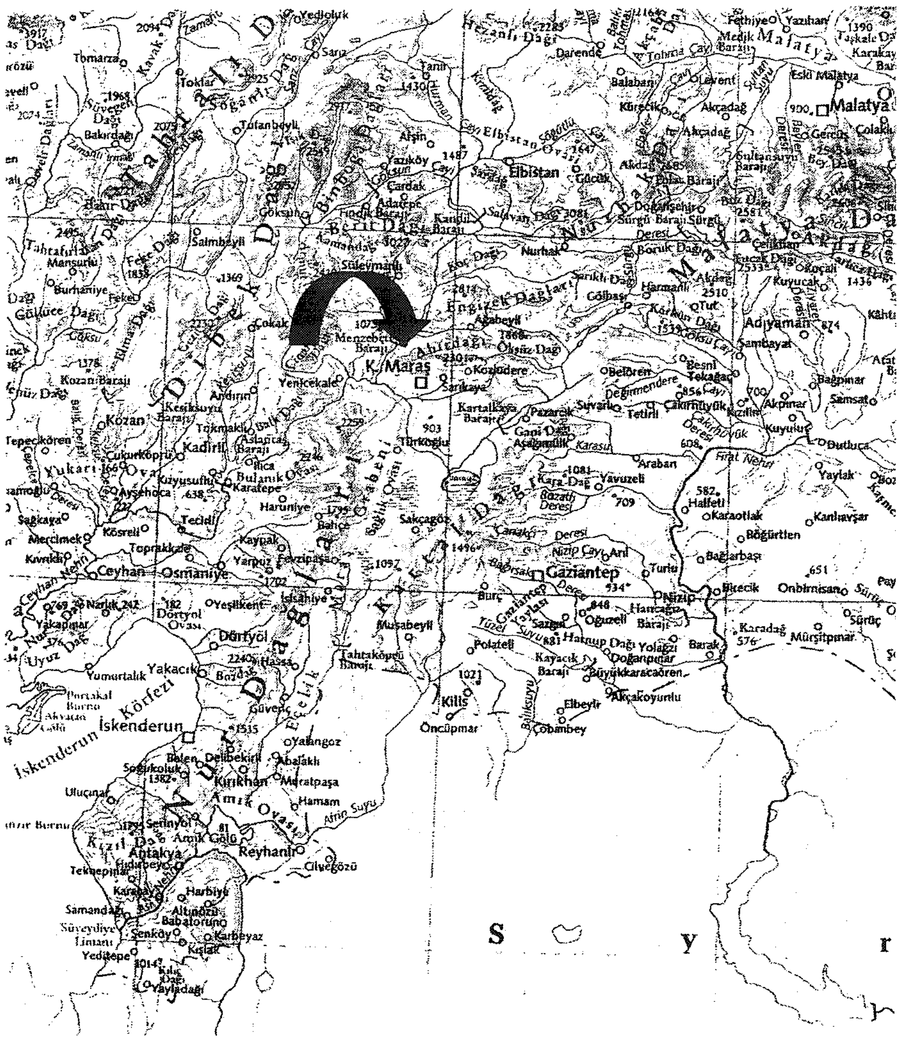


Fig. 4.1. The Kahramanmaraş Region

Traveling southwards from the city of Kahramanmaraş, one reaches Türkoğlu where the roads split into two major paths. The first one follows the western borders of the Gavur Lake Basin directly to Amuq further south. The other one angles to the southeast following Aksu and splits into a further two branches. The first branch leads to the East Basin through which one may eventually reach Gaziantep; and the other

runs to the northeast following the Aksu anti flow wise which eventually gets to Malatya and Adıyaman by way of Pazarcık.

Kahramanmaraş is famous for its water resources and many Dam Projects have made extensive use of these systems and rich water resources of the region. This work transformed the natural state of landscape and rivers in a major way since 1970's. Nevertheless, the survey works conducted prior to the building of dams have been an important source of data that has been utilized here. Along with many maps, aerial photographs from 1945 have been instrumental to reconstruct the landscape.

Lying approximately 610m above sea level Kahramanmaraş is known to be a land of the pastoralists. Groups are known to have practiced this lifestyle until recently. Bates studied (1973) the Yörük groups of Marash-Antep and Hatay provinces who travel to the highlands of Kayseri in the vicinity of Uzunyayla Pınarbashı in the summer. In the Ottoman times, the city of Kahramanmaraş (Maraş) was a major center of animal products and the Maras cow was a renowned species (Faroqhi 1997). Rich forests of Kahramanmaraş make this district also an important center of forestry products and honey production. Today, Kahramanmaraş is known by its red pepper and gum like ice cream. While metal and traditional textile production still continue today, quality wood working is slowly disappearing.

Kahramanmaraş is repeatedly mentioned in the Assyrian texts as Markasi, capital of the Kingdom of Gurgum. In the Roman imperial period it was called Germanikeia in honor of Caligula. Major historical roads are known to have crossed through Maras connecting Mesopotamia to Central Anatolia. Similarly, the road

connecting Lake Van in Eastern Anatolia to the northern town of Elbistan in Maras has been one of the most important routes crosscutting Anatolia in an east-west direction.

Previous archaeological research in the area starts at the turn of the century in Sakçagözü (Garstang 1908). After Garstang's explorations here, Sakçagözü continues to become a major focus of research in the area with the excavations conducted by Du Plat Taylor (1950) in the same cluster of sites. Most recently a team led by Andy Garrard (Garrard et al. 1996) has intensively surveyed the hill systems around the Sakçagözü with particular attention to the Paleolithic sites.

Braidwood's explorations in the Amuq, approximately 100km to the south, provides another context for comparative study (Braidwood 1937, Braidwood and Braidwood 1960). Based on the surveys of Algaze (1989b) (Algaze et al. 1986), prompted by the great scale dam projects, the upper Euphrates has been an important focus of research recently. Tony Wilkinson has surveyed the Karababa basin within this framework (1990c). The renewed work in Mersin also provides a good comparative 6th millennium BC context (Garstang 1953, Caneva 1999). More recently, the Chicago University has also renewed interest in the Amuq and excavations at Tell Kurdu under the direction of Aslıhan Yener are providing new evidence (Yener et al. 2000).

In the larger comparative framework, archaeological work conducted in Balikh (Akkermans 1989c, 1990, Akkermans ed. 1996, Verhoeven and Akkermans ed. 2000) Khabur (Lyonnet 2000) and North Jezira (Wilkinson 1990b, Wilkinson and Tucker

1995) offer data sets that provide important comparative materials. Further parallels exist running down the natural rift valley to the south, place Kahramanmaraş comfortably in the Syro-Levantine world of Wadi Rabah (Gophna and Sadeh 1988), River Qoueiq (Mellaart 1981), Arjoune (Marfoe et al. 1981) and Ras Shamra (de Contenson 1973, 1982).

Ceramics and the Nature of Evidence

The ceramics collected during the original surveys in 1993-94, were washed through a low-acid bath to remove the concretions. After this procedure, they were categorized according to diagnostic criteria involving description of paste color, inclusions, firing, surface manipulation including type of decoration, paint, burnishing and appliqué designs. Where possible vessel shapes were reconstructed (Elizabeth Carter, pers. comm.).

Major bulk of the ceramics that form the basis of discussion for a 7^{th} and 6^{th} millennium regional chronology come from the sites of KM 8, 70, 97, 67, 69 and 96. Specifically the site of Domuztepe (KM 97) gives a better understanding of the mid 6^{th} millennium assemblage relationships. Due to various other difficulties concerning the problems with collecting mounded multi-period sites and limited extent of actual excavations in the region, a clear assemblage development for the local evolution of 7^{th} to 6^{th} millennium assemblage can not be successfully demonstrated. There are strong clues however from sites such as KM 67, KM 96, KM 125 and Domuztepe itself that future work in the region may recover a smooth development connecting

various assemblages successfully. For the moment much of the development is underpinned by conventional comparisons with surrounding regions, specifically the Amuq (Braidwood and Braidwood 1960).

Regional chronology has been proposed however not only on the basis of these trans-regional comparisons but via an evaluation of internal relationships of assemblages through time. These assemblages are more clearly understood for the Late Halaf Period due to the excavations at Domuztepe and will be discussed in detail. Although the excavated layers of the site chronologically belongs to the Late Halaf Period, the ceramic evidence from Domuztepe fits within the earliest stages of the Halaf –Ubaid transition in ceramics in Northern Mesopotamia. The chronological framework presented here is ultimately a preliminary to a future more detailed work.

Many of the Ceramic Neolithic types are visually quite unique and easy to distinguish on the basis of their surface manipulation. For example burnished, incised and impressed types would be difficult to categorize in other terms even in the absence of a comparative framework. Nevertheless, to remain within the established framework, this study utilizes a combined terminology devised in Mersin (Garstang 1953) and the Amuq (Braidwood and Braidwood 1960) specifically for the local types some of which include the previously mentioned burnished, incised and impressed wares.

Core Evidence for Local Ceramic Chronology

Although there are strong indications that there is a smooth local development that should connect various 7th millennium assemblages successfully with Halaf Period assemblages, the evidence is detailed only for the Late Halaf sequence due to the excavations at Domuztepe. The 7th millennium sequence is best understood through assemblages in sites KM 8, 70, and 67 in rough order. 6th millennium sites including both Halaf and Halaf-Ubaid transitional types with good assemblages are Domuztepe (97), 67, 125, 69 and 96. After descriptions of basic types, I will discuss the evolutionary aspects of individual types as well as their role in contemporary assemblages. This discussion will ultimately lead to a proposal for regional chronology.

The following definitions itemize the diagnostic prehistoric ceramic types found in the regional survey collections in a rough chronological order.

Coarse Red Wash

App. B: Fig.B.1.f: Fig.B.2.d.A, D: Fig.B.2.f.I: Fig.B.2.g.F, G, H

This category may represent the earliest group of pottery, which can be dated back to the early 7th millennium B.C. The typical red wash on the exterior surfaces is flaky and poorly adhering to the sherd. They can be occasionally burnished but this is often difficult to see because of erosion. Often the red wash is soluble if washed thoroughly. It is soft fired and can have applied decoration such as knobs. These wares can be present in later 7th millennium. They are generally difficult to document

because of poor preservation. In the survey area KM 50 and KM 8 have yielded pieces that belonged to the described range. Parallels can be sought in Coarse Simple and Coarse Red Slipped Wares of Amuq A and B (Braidwood and Braidwood 1960, p.48 fig. 21 & p.71 fig. 40-41).

Applied Decoration

App. B; Fig.B.8.b. R

Applied decoration on exterior surfaces of pottery is typical of early to mid 7th millennium proto-Hassuna sites in Northern Mesopotamia such as Tell Sotto (Campbell 1992) . KM 110 has a typical sherd with an applied animal relief decoration on the exterior surface, which belongs to this range. Applied decoration can be on various different technological types.

KM 67 has a few pieces of ceramics with lugs attached close to the rim mainly on coarse ware. In the Amuq, such ceramics with lugs appear from the beginning of the ceramic sequence within the coarse simple ware range (Braidwood and Braidwood 1960, p.48 fig. 21; p.71 fig. 40). At KM 67, they are difficult to place earlier than latter part of the 7th millennium BC considering the assemblage they were found with.

Incised and Impressed Wares

Fig.B.1.a: Fig.B.2.c: Fig.B.2.g.F, G, H: Fig.B.8.b.T

This is a technique of decoration that belong to the general Syro-Levantine tradition with dates ranging from mid to late quarter of 7th millennium. Fingernail

impressions, circular impressions, discrete slashes to rocker patterns tend to be on sherds with mineral temper, mid to dark brown, relatively well fired. They can have a gray core and often has a lightly burnished surface. They are known to occur in Amuq from Phase A through phases C and D (Braidwood and Braidwood 1960, p.54 fig. 28-29; p. 79 fig. 54). In the survey area, they are represented best in KM 70, KM 8 although they continue to appear through the Late and Post Halaf contexts at Domuztepe.

Incision may be different than impression in technique and its relative proportions in assemblages may even frame chronological differences. In this regard, the full development of incised may belong to a slightly later date than impressed and burnished wares, but this is only a suggestion. Although the impressed ware has been recorded both in KM 8 and KM 70, the former site has a much better burnished ware representation while the latter one is better in incised wares. Without knowing the exact relationships of these wares within an excavated sequence, it is difficult to suggest which one has an earlier history.

Domuztepe's Incised:

Although there are some incised sherds amongst the Halaf pottery, this group has been restricted to a different type occurring within the Late Halaf assemblages of Domuztepe. Generally, it has a semi-coarse dark brown fabric, with prominent grit temper. Sometimes the vessels are for cooking but this is usually not obvious. A variety of simple geometric decorations are made by deep v-profile incisions.

Burnished Wares

App. B: Fig. B.1.b, c, g, h: Fig. B.2.a, b: Fig. B.2.d.B, C, E, H, I, K, L, M, I: Fig. B.2.e, f, g, h, i

Burnished wares are known to be present as the quintessential marker of Syro-Levantine traditions of the 7th millennium B.C. from the beginning of the Amuq ceramic phases (Braidwood and Braidwood 1960, p.51 and p.74). The term applied here relates to grit tempered ceramics, reasonably well fired but a grey core usually evident. The streaky burnish on a brown exterior surface is not as pretentious as the glossy film like burnishes, which occur in later 7th millennium B.C. (KM 67) and may be ancestral to the Domuztepe burnished wares. At Domuztepe, the burnished bowl shapes are different, however. The burnish in the mid 7th mill. BC wares is quite high usually with streaking still evident.

Burnished wares are an integral part of the Neolithic assemblages in the Levant and they constitute 20-30% of Late Halaf Period ceramics from Domuztepe (Campbell et al 1999). They are not just used for regular eating plates but also for fine wares. They rarely exist in the Mesopotamian Halaf contexts therefore reflecting continuity of a strong local element in the KM region.

Incised and impressed types are regularly found with burnished types in 7th millennium contexts of both the Amuq and Kahramanmaraş. In the Amuq, it was noted that incised decoration exist as early as the Phase A and aesthetically develops further in Phase B. In this regard KM 8 can be contemporary with Amuq phase A,

while KM 70 may belong to the beginning of phase B since the burnished types of KM 70 still resemble burnishes of KM 8 rather than later film like burnishes.

Amuq phase B is marked by appearance of pattern burnished and shelly red film ware. Shelly film types may be similar to delicate burnished types known from 67. The coarse red slip of Amuq B may be in some cases similar to burnished wares known from KM 8. Incised decoration and some earlier burnished ware exist in Amuq B in an assemblage with delicate burnished and pattern burnished types. KM 67 on the other hand has shelly burnished and pattern burnished types but not in an assemblage of earlier types. Therefore the early occupation at KM 67 may belong to an immediately post Amuq B phase.

KM 67 can be thought to have the chronologically closest assemblage to inception of Halaf types in the KM region. However, a smooth development of Halaf wares in context of earlier assemblages has been demonstrated neither in the Amuq nor in the KM region. There are strong clues however that the decorative aspects of pattern burnished types should be considered as a local prelude to inception of Mesopotamian painted types. For example, use of cross hatching or chevron patterns both on pattern burnished and incised types are interesting in this regard. These designs were widely used as painted decoration on Halaf ceramics. Pattern burnished, incised and impressed types although rare continue to be a continuous part of the assemblages through the Halaf Period both in the Amuq and in Kahramanmaraş.

Amuq phase C is marked by a decline in pattern burnished types and introduction of some little quantity of local painted Halaf ware. Some technological

changes in burnished types accompany this general trend. For example usage of slip in burnished wares and an increase in the thickness have been encountered as some technical changes observed in Amuq C. Considered as an assemblage, Amuq C may belong to a phase after the ceramic representation of the late 7th millennium BC occupation at KM 67 but before excavated Domuztepe phases.

Glossy Burnished Wares

App.B; Fig. B.2.g.A; Fig. B.2.h.J: Fig. B.2.i.G, H, K: Fig. B.5.g.A

These types may represent a local prelude to the inception of Mesopotamian painted pottery during the late 7th to early 6th millennium BC. They are grit tempered with grits often very fine; well fired often brown fabric with grey core. Surface is very highly burnished to produce a hard shelly surface. Occasionally the surface can be red rather than black usually because of the firing environment alone. The best examples of this type come from KM 67 and may be ancestral to the burnished wares known from the Domuztepe Halaf contexts in the region. The color distinctions between red, black and brown appear to be more pronounced than the burnished wares of the mid 7th millennium BC.

Domuztepe's Red, Brown and Black Burnished (in Late Halaf assemblages)

Campbell et al. (1999;398) state that "these three groups are closely linked and perhaps parts of the same spectrum rather than having exact divisions in between. Colors have been divided arbitrarily, but fall into generally consistent groups at

Domuztepe. Technologically this group is distinct from the Halaf. Fabrics have more grit temper and firing is not as high. Grey cores are the rule and with the black burnished, often the paste is heavily reduced throughout. The surface of the pots is burnished, sometimes to a high polish, sometimes merely well smoothed."

Pattern Burnished

App. B: Fig.B.1.d: Fig. B.4.b.A: Fig. B.8.b.Q

Medium fired, fine grit tempered gray core. Often made of entirely gray or black fabric. Smoothed surface to give a mat gray except where burnished which is glossy black. Sometimes can be brown because of firing variations. In Kahramanmaraş, it appears to belong to a date range from pre Halaf to Late and Post Halaf time periods. In Amuq, they have been recorded in Phase B through E under the general name of Dark Face Burnished Wares (Braidwood and Braidwood 1960). In the survey region, they are thought to have existed from pre Halaf contexts as they do in Amuq. However, our best examples come from Domuztepe's excavated layers.

Pre Halaf Painted

App. B: Fig.B.2.g.E

In Northern Mesopotamia, Hassuna and Samarra styles are known to have preceded the development of Halaf ceramics. Tell es-Sawwan and Choga Mami are the type sites to characterize Samarra wares although they were also found in Yarim Tepe I and Tell Hassuna itself. The fabric of Samarra has fine dark colored mineral

grits with cream to buff colored and smoothened surfaces. Sherds can be painted with mat black to brown with continuous motifs placed in horizontal bands, diagonal patterns, crosshatched triangles, ladders and stepped patterns. The Samarra-Halaf transitional wares are similar in fabric to Halaf with smooth, buff colored surfaces and mat black/brown paint. Low carinated bowls and angle necked jars are recognizable shapes with decoration similar to Samarra. In the survey, these categories are rarely found although there are a few poor examples. They occur in very small numbers at Domuztepe and a few may be present at KM 8. Pre Halaf assemblages in Kahramanmaraş could be better reflected in late 7th through early 6th millennium BC development of burnished ceramics. Paint on these types is not found but decoration in the form of pattern burnish or incision and impression are commonly present, very often resembling symbolic decorative patterns on Halaf ceramics.

Painted and Unpainted Halaf

Fig.B.3: B.4

These two categories are related to Halaf Pottery of Northern Mesopotamia. The fabrics typically range between orange and buff, sometimes with a grey core. They are highly and evenly fired and usually have a clear orange to buff surface color. Usually they have more grit temper than is traditional in Halaf ceramics but an unbroken pot would look very similar to one from the east. They are frequently painted in a range of colors, from red through orange to dark brown and black. The paint is often glossy in contrast to the Ubaid style matte paint. Simple horizontal and

diagonal bands, solid paint surfaces, cross hatching, zig-zags and bucrania motifs occur as common design elements (Campbell 1992, Nieuwenhuyse 2000).

Both Campbell (1992) and Niuewenhuyse (2000) suggest that the painted decoration of the pre-Halaf through Halaf I is characterized by bounded designs, in which the individual motifs are attached to horizontal bands. Mostly a single decoration zone occupies a large part of the vessel surface (Nieuwenhuyse 2000). Vertical bands become more common from Halaf II onwards. The decoration is mostly on the exterior and cover most of the vessel surface. Cross hatching, triangular patterns, rows of solid triangles, zig-zags, lozenges and dots are common.

Halaf II designs are reported to be free floating in narrow alternating bands. Decoration is more complex with combination of motifs rather than single repeated elements. Vessel interiors gain importance and are more often decorated. Cables, solid semi-circles, chevrons, dots can be popular (Nieuwenhuyse 2000). According to Nieuwenhuyse, two dimensional checkerboard patterns increase in frequency during the Halaf IIb phase and the Halaf Ubaid Transitional.

No attempt has been made to distinguish between the Halaf I or II in the survey assemblages. However, due to the excavations at Domuztepe, it was possible to identify Halaf II and Halaf-Ubaid transitional occupational histories on some sites with more confidence (Chapter 5 and 8).

Thick Burnished

Unlike the other pottery types, this does not simply describe a type of fabric or decoration. Instead, it encompasses a very specific type of shape and manufacturing process of a vessel which must have had a specific function and which has almost no external parallels. The fabric is relatively fine, usually well fired and tending to orange with only fine temper. The vessel walls are thick and have a poorly developed exterior burnish, usually applied in long, thick, well defined strokes. The vessels invariably have globular bodies and disproportionately large and long cylindrical necks, which have been manufactured in separate sections and often are poorly joined together. In some places they occur in very large quantities and on the southeast of the mound of Domuztepe are densely scattered across the surface (Campbell et al. 1999, also refer to the discussion of Domuztepe's phases A1 through A3 in this section).

Bichrome

Fig.B.5.

Although there are few Halaf style bichrome sherds from Operation II at Domuztepe, including examples with white paint, they are very rare. Much more common are bichrome sherds with Ubaid traits. The fabrics are usually well fired, orange and rarely with a gray core. The surface often has a thin orange slip and the paint colors are dark brown and dark orange or red. Shapes include sinous sided bowls with clear Ubaid parallels and motifs are also rather different from standard Halaf with possible Ubaid links. This category can be included in the Painted Orange

in general. Bichromes at sites 67 and 96 show more clear links to Ubaid with purply red bichromes on a paler surface and more distinctive Ubaid shapes.

Bichrome and polychrome ceramics are important indicators of Late Halaf and Halaf-Ubaiḍ Transitional Periods in Northern Mesopotamia (Campbell 1992). Best known examples come from Arpachiyah (Mallowan 1935). They are believed to be prestige items (Campbell 1992). Specifically the appearance and dissaperance of bichromes in presence of bow-rim jars in Aqab (Davidson and Watkins 1981) has been identified as the Halaf Ubaid Transitional (Breniquet 1996). In the Kahramanmaraş survey, they are found in assemblages of KM 67, KM 96 and Domuztepe (KM 97).

In the Amuq, phase D was marked by an assemblage of transitional bichromes and monochromes resembling Ubaid styles (Braidwood and Braidwood 1960). In this regard, Amuq D can be contemporary with KM 67 post Domuztepe assemblage. Amuq E is reported as full Ubaid with big bulk of the assemblage being Ubaid monochrome although some trace amounts of Halaf were still detected in the assemblage. This phase indicates links to KM 96, KM 133.

Painted Orange

Campbell et al. (1999; 402) describe this type as being "closely linked to bichrome. Only a single color of paint used but the fabrics, shapes and motifs are rather similar. A dark brown or black paint is usually used on the surface which has had a thin orange or red slip applied." KM 67 has pottery which appears to be related

to painted orange but the orange is more like a wash on creamy surface with charcoal like black paint or purply red-black bichromes with Ubaid designs more apparent. In the assemblages of KM 67 there exists some red burnished and few Halaf sherds. Considering the smaller percentages of Halaf sherds and prominence of painted orange on this site, we may suggest that further continuity and development of painted orange reflects post Domuztepe contexts which may chronologically be approaching to Halaf-Ubaid Transitional in Mesopotamia.

Ubaid Wares

Fig.B.6: B.7

Grit tempered, well fired rarely with a grey core with small quantities of chaff visible on the surface. Surface is usually smoothed. Fabric colors range widely but have a tendency in the most classic examples towards light greenish fabric. Paint colors are mat and rather dull maroons and purple reds.

The most diagnostic of the Ubaid Wares is the matte paint color and simple or sinuous sided bowl shapes and motifs (interrupted designs, zigzags, lines, lozenges). Typical sherds find their best parallels across Northern Mesopotamia (Gawra). Classic southern Ubaid types are occasionally present but rare at DT. Towards the Later Ubaid, symbolically rich paint of Halaf declines.

Specifically two survey sites KM 96 and KM 67 have yielded pottery, which belong to a phase that can be immediately Post Domuztepe yet still covering a Halaf-Ubaid Transitional range. In this phase, the bichromes appear different than the

Suggested Chronological Relations between Ceramic Types

Based on the diachronic and synchronic relationships of the ceramics present in the KM region, the following proposal for the regional ceramic phases discusses contemporary assemblages through time. Sherd densities were mostly low to employ a meticulous phasing for the early Halaf period. On the other hand, the later Halaf and Halaf-Ubaid transition in ceramics is better understood due to excavations at Domuztepe and large collections from sites KM 96 and 67.

KM Ceramic Neolithic Phase I

The poorly fired types at KM 110 and KM 67 represent the first phase of ceramic occupation in the region: coarse red wash and applied decoration.

KM Ceramic Neolithic Phase II

The second phase of the Neolithic dates to the mid 7^{th} millennium and is represented on the sites KM 125, KM 8, KM 9 and KM 70. It is made up of an assemblage of incised, impressed and burnished ceramics. KM 8 is the best-represented site with a good assemblage of burnished types found on the surface. KM 70 accompanies KM 8, although the latter may be slightly earlier.

KM 9 is similar to KM 8 and joins in this category with incised and streaky brown burnishes. Presence of classic red wash, badly fired with thick dark core may be earlier yet in the absence of internal relationships it is difficult to propose anything further.

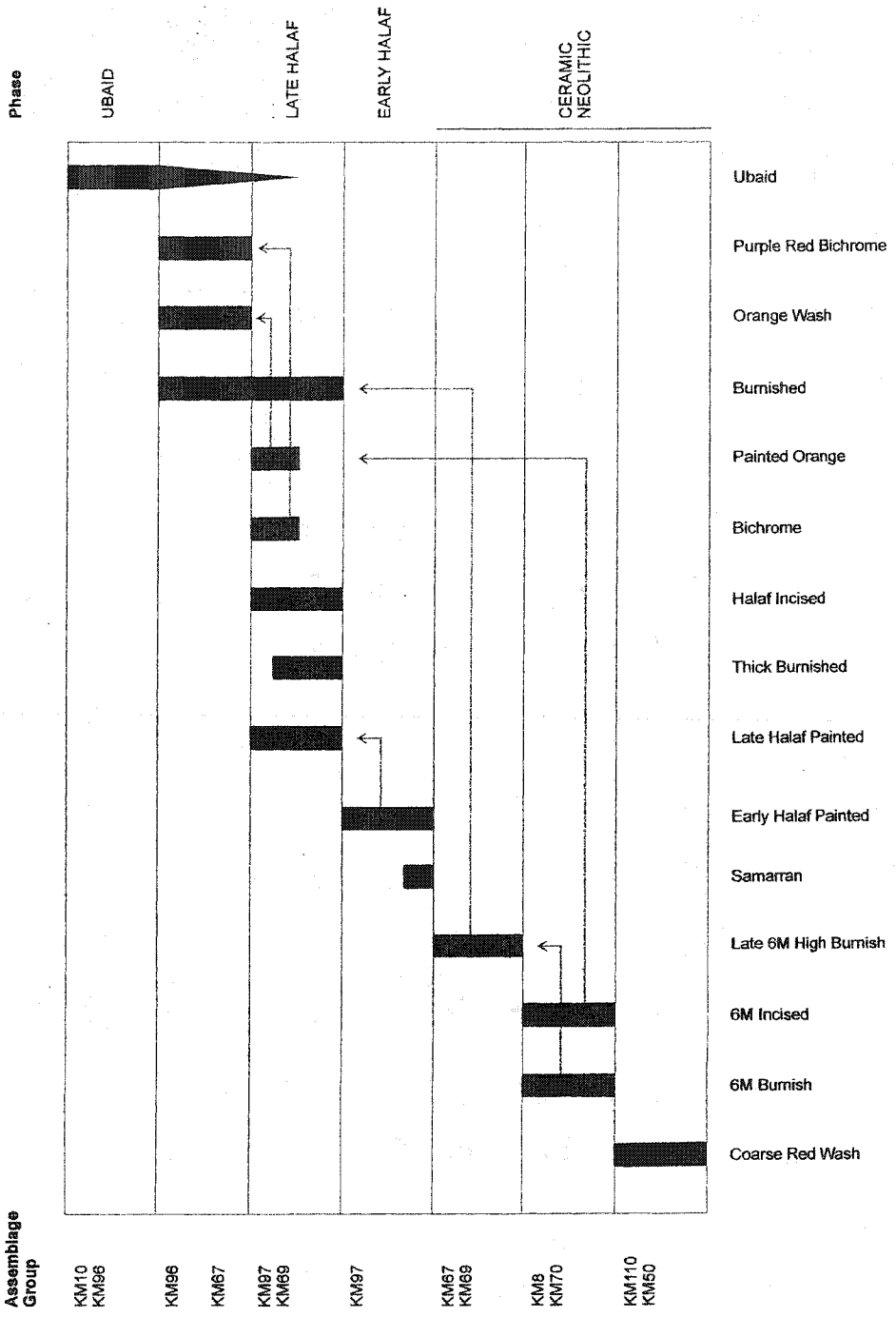


Fig 4.2. Evolution of Prehistoric Assemblages in Kahramanmaraş

KM Ceramic Neolithic Phase III

This phase of the Neolithic is best represented at KM 67 although Domuztepe (97) and 125 has also produced a few late 7th millennium sherds. This phase is comparable again to Mersin (Garstang 1953) and Amuq (Braidwood and Braidwood 1960) with its typical black and some red burnished types with hard shelly surfaces. A small amount of pattern burnished can also be present accompanying the assemblage. High straight neck jars, round rims and slightly round bowls are characteristic shapes. The technological development of burnished ware tradition is important for the region and could represent a local development if studied further through an excavated context.

KM Phase IV-Halaf

Halaf wares are easily determined on the basis of their pink-buff colored hand made well-fired pottery often with paint. Their exact chronological positioning becomes more difficult to assess however in the absence of a clear picture for early 6th millennium local assemblage relationships. While this general transregional type can help identify sites of the 6th millennium, local types that co-existed with Halaf ware are also important. Domuztepe excavations on the other hand provide a good context for Late Halaf types and their internal chronological relationships. I used this detail for two purposes: to model mobility during the Late Halaf Period in the region and also to understand the processes leading to the abandonment of the site of Domuztepe

(Surface collection of Domuztepe). Therefore, I will include an extended discussion of Domuztepe's ceramic phases in the following paragraphs:

Domuztepe A1-A2-A3 (Later KM phase IV)

The excavated ceramic assemblages were divided into three main phases in Domuztepe.

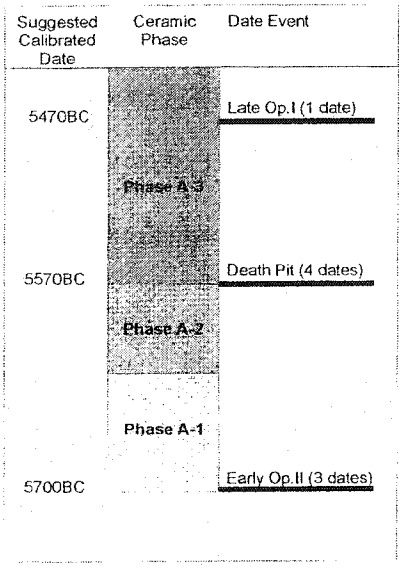


Fig.4.3. Excavated Phases of the Late Halaf period at Domuztepe

For each phase, the excavators suggested a different duration. Phase A1 ceramics are dominated by classic Halaf types making 65% of the assemblage. Painted types appear 4 times more than the unpainted types during this phase. Transitional types are absent. Rarely appearing bichrome sherds have affinities to Halaf bichromes. Burnished sherds make up the 18% of the assemblage with black burnished being dominant. Incised and pattern burnished occur in small percentages, 1.5% and 2.5% respectively. Thick burnished sherds are present in low but significant quantities 3% at

this stage. Coarse sherds make up about 12% and are evenly divided between vegetable and grit tempered ones.

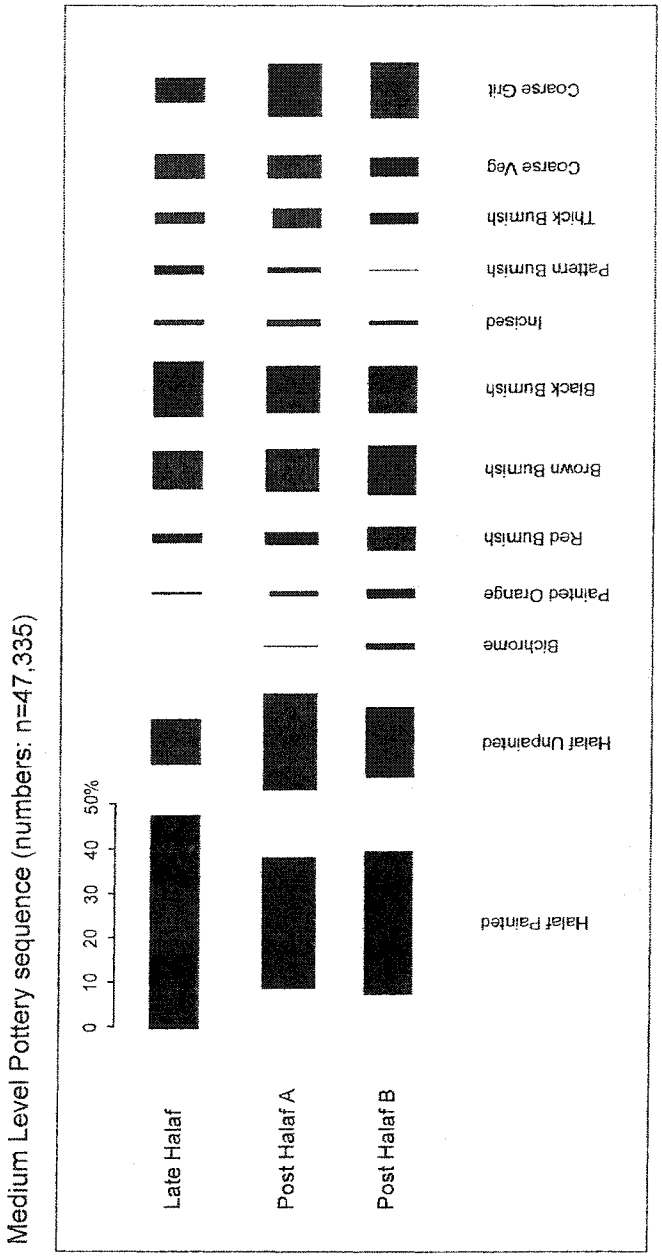


Fig.4.4. Change in Assemblages through the Domuztepe Phases A1-A3

phase however incised decoration remains as a rare but constant type (1.5%). Coarse pottery now makes up about 20% of the assemblage but grit-tempered sherds are about three times more common than vegetable tempered ones.

Campbell suggests parallels for the transitional wares in the Northern Levantine sites, such as Ras Shamra, and Northern Jordan valley sites, such as Tel Tsaf in Wadi Rabah (Campbell et al. 1999).

KM Phase V-Post Domuztepe

In relation to the assemblage development at excavated layers of Domuztepe, a post Domuztepe phase can be identified through transitional wares such as bichromes. Although Domuztepe was abandoned immediately after phase A3, site 67 for example may have continued to be occupied slightly longer than Domuztepe, as the bichromes found on the site appear to be related to DT A3 with more developed Ubaid traits indicating a later abandonment. In the vicinity of Domuztepe, KM 96 also yielded transitional types both connected to Domuztepe and 67. Bichromes present at KM 67 and KM 96 have stronger tendencies toward Ubaid shapes, thus representing the post Domuztepe (or Halaf-Ubaid Transitional and developed Ubaid) periods.

There are roughly two phases to the Post Domuztepe developments: Early Post Domuztepe phase represented at sites such as 67 and 96 and a more developed later phase approximating to classic Ubaid at sites such as 10, 133. KM 96 and 69 also represent developed phases of the Post Domuztepe occupation in the region. While the earlier post Domuztepe phase can be identified on the basis of existence of bichromes also known from Late Halaf deposits at Domuztepe, later more developed post

Domuztepe or Ubaid phase can be determined on the basis of existence of classic Ubaid types in an assemblage without bichromes and general Halaf categories.

If as suggested the appearance and development of bichromes can be referenced in terms of a Halaf-Ubaid transition (Breniquet 1996), then the last phases of occupation at Domuztepe (A2 and specifically A3) and early Post Domuztepe phases at 67 and 96 fit well within the earliest stages of a Halaf-Ubaid Transition. In this context, KM 96 is the only site known to have a continuous occupation from this transitional phase onwards toward more developed Ubaid, although the site was abandoned during this later Ubaid occupation.

6th millennium Ceramics in the "Western Halaf"

The local late 7th millennium contexts may be significant to understand the local impetus behind wider scale adoption of Halaf style painted ceramics. In our particular case for Kahramanmaraş, the broad trend toward use of painted ceramics and its social and economic underpinnings can be searched in the evolution of burnished, incised traditions of the 7th millennium BC. As will be elaborated further in the settlement pattern analyses, the settlement patterning of the Halaf Period in Kahramanmaraş may also be rooted in the late 7th millennium BC. Perhaps a time of increased interaction and further reliance on agricultural products can be envisioned to have a global effect on various communities before painted ceramics became part of them.

The burnished and incised types emerge as important markers through which we can understand the local developments in the western sectors of the Halaf material culture distribution. In Kahramanmaraş, their development can be best observed in the assemblages of 8, 67 and 97 in rough chronological order. In general, this evolution can be observed in changes in production technologies and styles. While earlier burnished types appear chunky with thick walls and streaky burnish visible on the surface, later 7th millennium BC types have thinner walls and rims with higher burnishing creating a shell/film like surface.

There may be further potentials in reconsidering the local development of ceramic decoration in the Western portions of the Halaf distribution. Comparative developments in local types vs. the contemporaneous North Mesopotamian ones may potentially reflect similarities in a broad trend on the one hand and locally contingent aspects of this broad trend on the other hand.

On this note, some similarities in decorative techniques between the pattern burnished types of the Northern Levantine tradition and the painted ceramics of the Mesopotamian early Halaf tradition were noted long ago (Perkins 1949, Mellaart 1975, 1978). For example Mellaart notes that the Can Hasan ceramics can sometimes be "oddly" like Halaf in terms of the use of decorative motifs on them. However, since burnished types are virtually absent in the assemblages of traditional Halaf heartlands and there do not appear to be technological associations in the production techniques, the decorative similarity has not been taken too seriously. A comparative study,

however, may provide insights for the wide scale success of painted ceramics and their symbolism during the Later Halaf.

From a Kahramanmaraş perspective, an interesting point concerns the Halaf/Ubaid cultural divide. The later 6th millennium wares of KM and Amuq make the Halaf-Ubaid divide arbitrary and difficult to pinpoint. For example, painted orange and bichrome wares have been observed to belong to the transitional range in other sectors of 6th millennium North Mesopotamia. These types occur both in Late Halaf phases of Domuztepe and early post Domuztepe sites, giving an image of an internal development as well as an external one.

As will be discussed in the following chapters, this phase of transition in ceramics correlate with gradual changes in settlement patterns in Kahramanmaraş. While apparently a transition in Kahramanmaraş was taking place perhaps similar in nature to that of the North Mesopotamian contemporaries, the social and economical context of this transition needs to be elaborated in context of settlement patterning. It is plausible that the so-called Halaf-Ubaid transitional identified in ceramics underpin and accompany a shift both in the economic and social realm.

Unlike Northern Mesopotamian counterparts, local Chalcolithic of Kahramanmaraş does not give indications of strong Uruk ceramic existence, thus the assumption that Ubaid might be a prelude to Uruk in Northern sectors of the Fertile Crescent does not hold Kahramanmaraş. However, changes in the social make up during the 6th millennium BC in general should have created a context upon which later Chalcolithic and Early Bronze Age sites of the Kahramanmaraş developed.

At this time, although Kahramanmaraş was still influenced by Mesopotamia, by the end of the 6th millennium BC, its relations may have been constricted to a strip encompassing the Northern Levant in the south to Malatya in the North (Campbell et al 1999). As it has been discussed in Chapter 2, during this time Northern Mesopotamia would appear to be further integrating with Southern Mesopotamia.

Chapter 5

Landscape and Communities in the Kahramanmaraş Survey Region: Synchronic and Diachronic Perspectives

Whereas the previous discussion focused on culture historical progression of ceramic types and their general distribution among the sites of Kahramanmaraş, this section intends to place culture historical progression in a local development of landscape and community formation. Specifically it aims to model the history of occupation and community formation in the three basin systems of Kahramanmaraş in a comparative fashion.

Nature of Evidence and Culture-Historical Structure of Site Distribution

The original survey and artifact collection in the Kahramanmaraş Survey Region took place in 1993-94 by a UCLA team led by Professor Elizabeth Carter (Carter 1996, 1997). Kahramanmaraş is a rapidly industrializing city, growing in a very fast pace as any other town in Turkey. Destruction of sites is a serious concern in the area. Recognizing the immediacy of the problem, Carter focused on recording of relatively visible, mounded sites in the interconnected basin systems of the south Kahramanmaraş. The geographically difficult nature of the Kahramanmaraş region had to be dealt with during the surveys. The tectonically active southern valleys of Kahramanmaraş are interspersed with marshes, major canal works and large fields of cotton, sugar beet and corn. Forests and rugged limestone hills often must have made it very difficult to collect or even record potential sites. Despite these difficulties the original surveys recorded approximately 250 sites in an 1100 km2 area within the first two seasons of work.

Within these sites, two sites were originally recorded as Halaf sites KM 97 and KM 69. James Snead conducted more intensive surveys in the region specifically in the 11 km corridor between the two sites in an attempt to detect further 6th millennium prehistoric occupation (Carter et. al. 1999). This study did not yield any evidence for existence of 6th millennium occupation although it demonstrated the need for understanding extent of Holocene environmental change. In order to understand the nature of distribution of sites further a geomorphological study was conducted, which gave some evidence for Holocene alluviation in the region. For example a series of soundings around the site of Domuztepe revealed that the alluviation may have reached at least 2m depth since the Roman times in some areas possibly obscuring a better understanding of prehistoric site distribution (Eissenstat 1998, Hill and Eissenstat 1998).

During the excavations on the site of Domuztepe, a better understanding of the prehistoric pottery specifically relating to the 6th millennium became possible. In 1998, it was felt that a re-examination of survey material based on the information gained from Domuztepe could potentially detect previously missed prehistoric pottery in the original collections. This re-examination was supervised by Dr. Stuart Campbell. Whereas the Early Bronze Age through the Iron Age component of the survey was analyzed by Dr. Lynn Swartz, I have concentrated on the ceramic Neolithic through the 6th and 5th millennium BC component. The data presented here in the site catalog (Appendix A, Table. 5.1.) and the pottery catalog (Appendix B, figs. 5.1., 5.2., 5.3., 5.4., 5.5.) is primarily based on the recordings made during this re-examination.

Some of the chronological attributions recorded in the original site catalogue may have been based on on-site observations rather than collections. In such cases, the stored collections from some sites were observed not to have any representation although the original catalogue states potential presence of Neolithic or Chalcolithic periods. Relying on the expertise of the survey team, I had decided not to discard their observations but consider them together with the results of my re-examination of the collections. Although such speculative sites obviously do not form the backbone of the discussion, when plotted in distribution maps, they conform to a coherent pattern of mobility around long-lived sites of the 6th millennium. The presence of this pattern in more than one basin system of KM also strengthens the idea that the original recordings albeit in absence of confirmation should be reliable. Data relating to site sizes and locations are also based on records of the original survey. No further collections have been made after the original survey although occasional visits have been performed.

There are many problems with collecting mounded sites. Very often the earlier settlements are buried under the later more substantial ones making detection of earlier inhabitation very difficult. In most cases a site may appear to be presented here as a prehistoric site even on the basis of a very low diagnostic artifact density present in the collections. Distribution and density of artifacts may vary according to a wide variety of variables beyond the control of the archaeologist (Adams 1981). Quantitative criteria to distinguish between a "settlement" and "random occurrence" may mask a more dynamic understanding of the 6th millennium landscape (Akkermans 1990). Such criteria would introduce the danger of writing history of densely populated or long-lived sites in a

vacuum (Perles 2001). Here, even a few diagnostic sherds found in original collections have been accounted for, since it is possible that some of these low-artifact densities reflect temporary or short-lived sites or activity areas. As will be clear from the discussion in the following chapters, there are certain discernible principles in the way low artifact density sites are located especially in relation to sites with long histories of occupation. The permanence and chronological resolution of lithic occupations have not been inferred within the limits of this study. Many of the earlier lithic sites can in fact be occupations of permanent nature. Some suggestions on the nature of these sites have been made by Dr. Elizabeth Healey and have been included in the site catalogue.

All sites recorded as having Halaf Period ceramics were abandoned during the latter 6th millennium BC. However this does not necessarily reflect a wholesale abandonment of the region. A gradual process of population dispersal appears to have resulted in the abandonment at the sites examined. This new pattern also indicates less mobile and more dispersed choice in settlement during the 5th millennium BC. It is possible that nucleation in some areas may have taken place. There is, however, currently no evidence of such nucleation before the Early Bronze Age. Various factors may have influenced the visibility and reliable site size estimates. On the other hand, chronological relationships among the sites of a basin system suggest an internally coherent picture. Furthermore, as stated before existence of such coherence in more than one locality is assumed to strengthen the view that the evidence should be a fair representation of the prehistoric landscape.

Ultimately, within the current limits, the study presented here charts out how communities of these basin systems, situated within particular social and economic environments, responded to wider trends. Specifically, synchronic variation is emphasized in a comparative fashion so that an understanding of both wider trends and their individual effects on particular communities can be achieved.

Four interconnected basin systems structure the pattern of settlement development. These basins are called hereby the South-western Basin (local name: Gavur or Sağlık Ovası), the South-eastern Basin (local name: Narlı Ovası), the Central Basin (local name: Türkoğlu Ovası), and the North Basin (Maraşaltı Ovası). Except for the Western Basin, the rest present a well-attested settlement development during the 6th millennium BC. Site clusters in these basins represent micro systems with internal coherence, relatively less disturbed, thus more reliable to understand the settlement change than the whole macro-region.

The Western Basin appears largely devoid of settlement possibly owing to the presence of large marshy lake here. One exception in the Western Basin is KM 21 located on the western perimeter of the marshy Gavur Lake. This site has some evidence for 6th millennium presence. The settlement development becomes more visible with Late Chalcolithic in this part of the survey region as the corridor directly connecting the north and South through the Gavur (South-western Basin) gains an emphasis at this time (e.g. the locations of KM 133, and KM 17).

Each of the sub-regions geographically emphasizes particular sets of connections to areas in and out of the survey region. The South-eastern Basin has a natural passage to

Sakçagözü through which one reaches the Amuq. It also has a location connecting Gaziantep and Malatya both to the Amuq and to Mersin. The Northern sub-region on the other hand emphasizes a different sphere of connections mainly from Elbistan to Adana. The Central sub-region has a location mediating between the North and the South-east basins. This central position, well guarded by narrow gorges and forests, might be responsible for the repeated occupation and a well-attested settlement development here. The largest recorded site and center of a Bronze Age nucleation in the area, Danışman Tepe (KM 55), is located in the Central Basin.

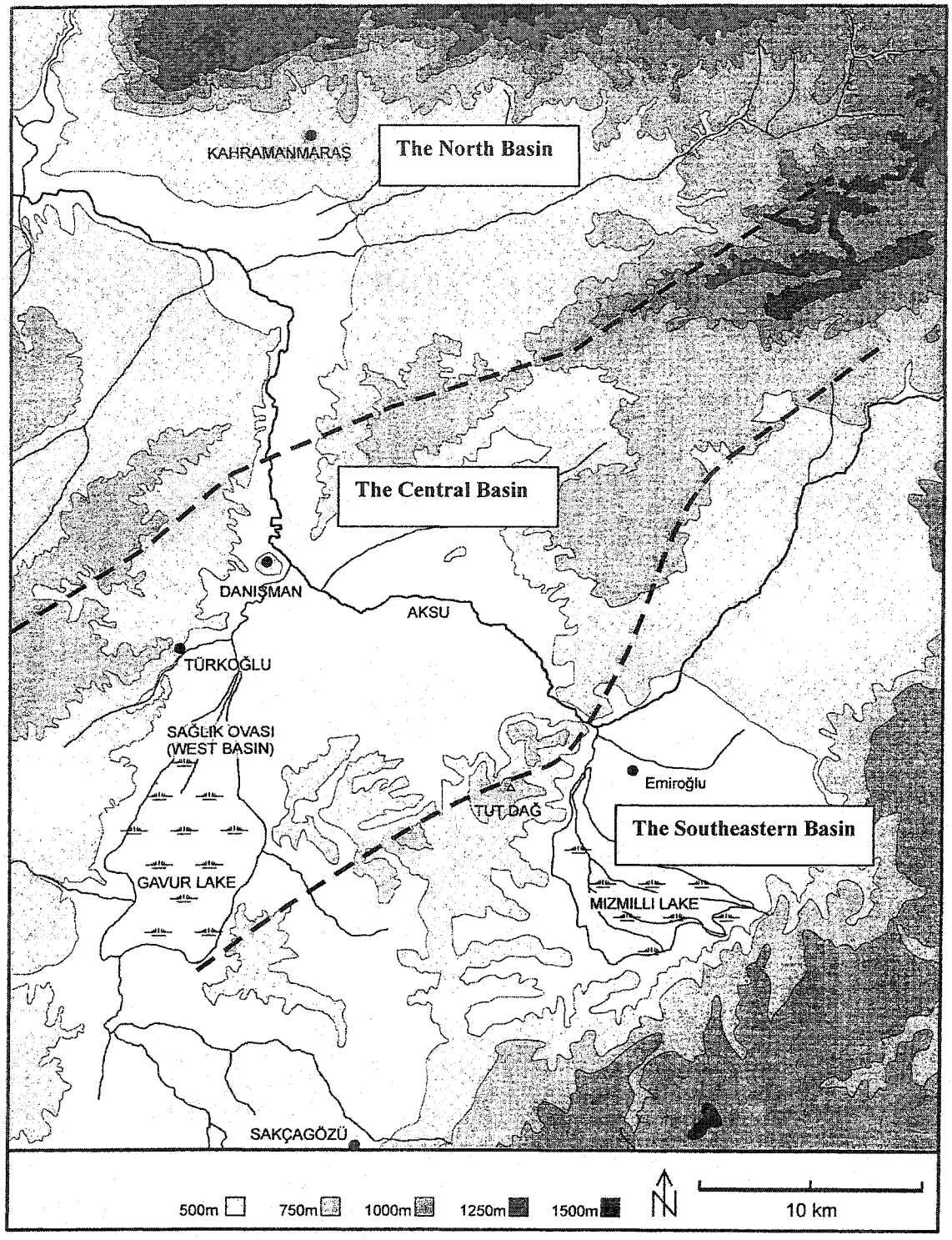


Fig.5.1. Geographical Divisions of the Kahramanmaraş Survey Area

Table 5.1. Prehistoric Sites of Kahramanmaraş

site KM#	Area (ha)	Zone	Neolithic	Halaf	Ubaid	Late Chalcolithic	EBA	MBA	LBA	Iron	Hellenistic	Medieval	Artifact type
1	n/a	C							x	x			
3	1.23	C		x	x		x		x		x	x	
4	0.79	C		x	x			x	x	x	x	x	
6	0.22	C	x			x						x	pottery
8	n/a	C	x				x					x	lithics & pottery
9	n/a	C	x								x	x	pottery
10	2	C			x	x	x		x	x	x		
12	1.54	C			x		x		x				
16	1.54	C				x					x		
17	4	C				x	x	x	x	x	x	x	
21	2.1	C	x	x		x	x		x	x	x	x	lithics
28	1.82	C				x	x				x	x	
36	n/a	C			x		x				x		
39	n/a	C	x			x					x	x	lithics
40	2.01	S	x			x	x		x	x	x		lithics
41	0.5	S				x		x	x	x	x	x	
43	1.77	C									x		
45	0.57	S		x			x	x	x	x	x		
49	0.5	S	x		x	x					x	x	lithics
50	n/a	S	x							x	x	x	pottery
51	0.2	S				x		x	x	x	x		
55	107	C				x	x				x		
56	0.5	C			x	x					x	x	
57	0.13	C				x		x	x	x	x		
63	1.4	C			x		x	x	x	x	x	x	
67	1.8	C	x	x	x						x	x	lithics & pottery
68	2	C			x	x	x	x	x		x	x	
69	0.13	C	x	x	x						x		pottery
70	0.5	C	x		x	x						x	pottery
71	0.13	C			x	x	x				x		
72	0.16	C				x					x	x	
80	2.6	S				x	x	x	x	x	x		
84	7.07	S		x				x		x		x	
87	0.5	S			x			x	x	x			
88	6	S	x		x	x	x	x		x		x	pottery
91	0.79	S		x				x	x	x	x		
92	2.4	S	x	x				x			x	x	lithics

Table 5.1. (continued)

site KM#	Area (ha)	Zone	Neolithic	Halaf	Ubaid	Late Chalcolithic	EBA	MBA	LBA	Iron	Hellenistic	Medieval	Artifact type
95	6	S	x				x				x	x	lithics
96	0.33	S			x	x					x	x	
97	20	S	x	x							x	x	lithics
99	0.5	S			x							x	
102	3.14	C									x		
103	0.33	S	x	x		x	x		x	x	x	x	lithics
110	1.7	S	x	x	x	x	x				x	x	pottery
112	0.9	S				x						x	
113	0.44	N				x	x	x			x		
116	n/a	N		x									
118	0.28	N				x	x					x	
119	0.38	N				x	x			x	x		
120	0.64	N	x	x	x	x	x		x	x	x		pottery
124	0.44	N	x	x				x	x		x		pottery
125	0.44	N	x	x	x		x	x	x				pottery
126	n/a	N	x			x							pottery
127	0.42	N				x	x				x		
129	3.63	N	x								x	x	lithics
131	0.95	N			x	x	x						
133	2.78	N	x	x	x	x					x		pottery
134	1.33	N	x										lithics & pottery
135	0.13	N		x	x					x	x	x	
136	0.2	N			x						x	x	
137	4.91	N						x	x	x	x	x	
138	0.07	N				x						x	
141	0.6	N		x									
147	0.28	N	x										lithics
148	0.64	N	x			x							lithics
149	0.2	N	x										lithics
150	0.79	N				x				x	x	x	
159	2.54	N			x						x	x	
163	0.07	N			x					x		x	
164	1.77	N				x	x	x	x	x	x		
171	0.2	N	x			x							pottery
177	0.24	N	x							x	x		lithics
179	1.32	N									x	x	

Table 5.1. (continued)

site KM#	Area (ha)	Zone	Neolithic	Halaf	Ubaid	Late Chalcolithic	EBA	MBA	LBA	Iron	Hellenistic	Medieval	Artifact type
181	2.69	N				x	x		x	x	x	x	
188	0.2	N	x										lithics
189	0.38	N	x	x		x	x	x	x	x	x	x	pottery
191	0.18	N	x									x	lithics
194	0.05	N	x									x	pottery
196	2.54	N				x	x	x	x	x	x		
199	0.03	N	x										lithics
202	0.64	N	x			x	x				x		lithics
203	0.2	C				x							
204	1.77	C	x			x	x			x	x	x	lithics
205	n/a	C				x					x		
210	0.79	S		x		x	x	x		x	x	x	
211	0.95	C	x	x	x	x		x	x		x	x	lithics & pottery
213	0.2	C			x						x	x	
214	0.5	S			x	x	x						
216	n/a	C									x	x	
217	n/a	C	x										lithics
221	0.38	C				x	x					x	
227	n/a	C	x								x		lithics

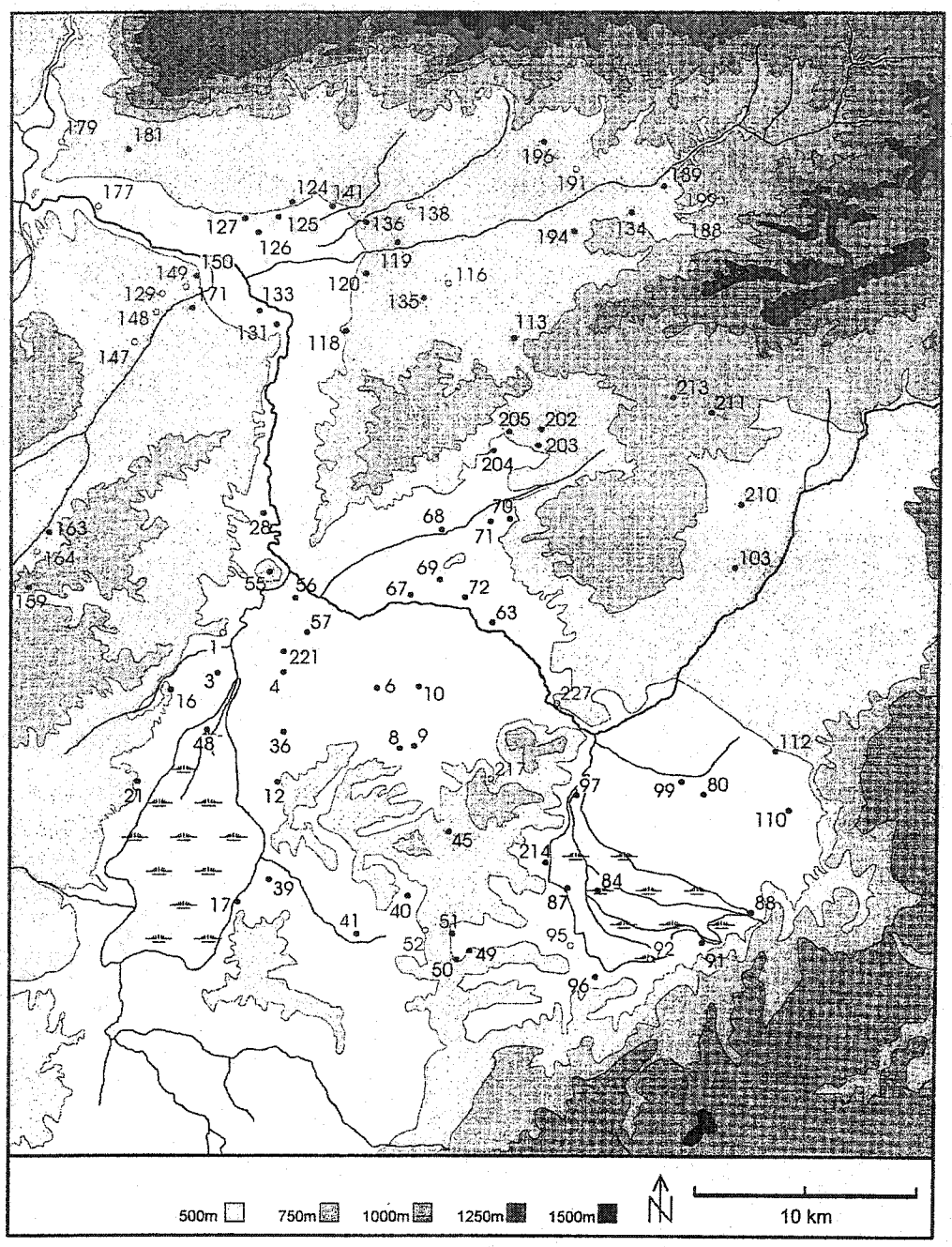


Fig.5.2. Distribution of Prehistoric Sites in the Kahramanmaraş Survey Region

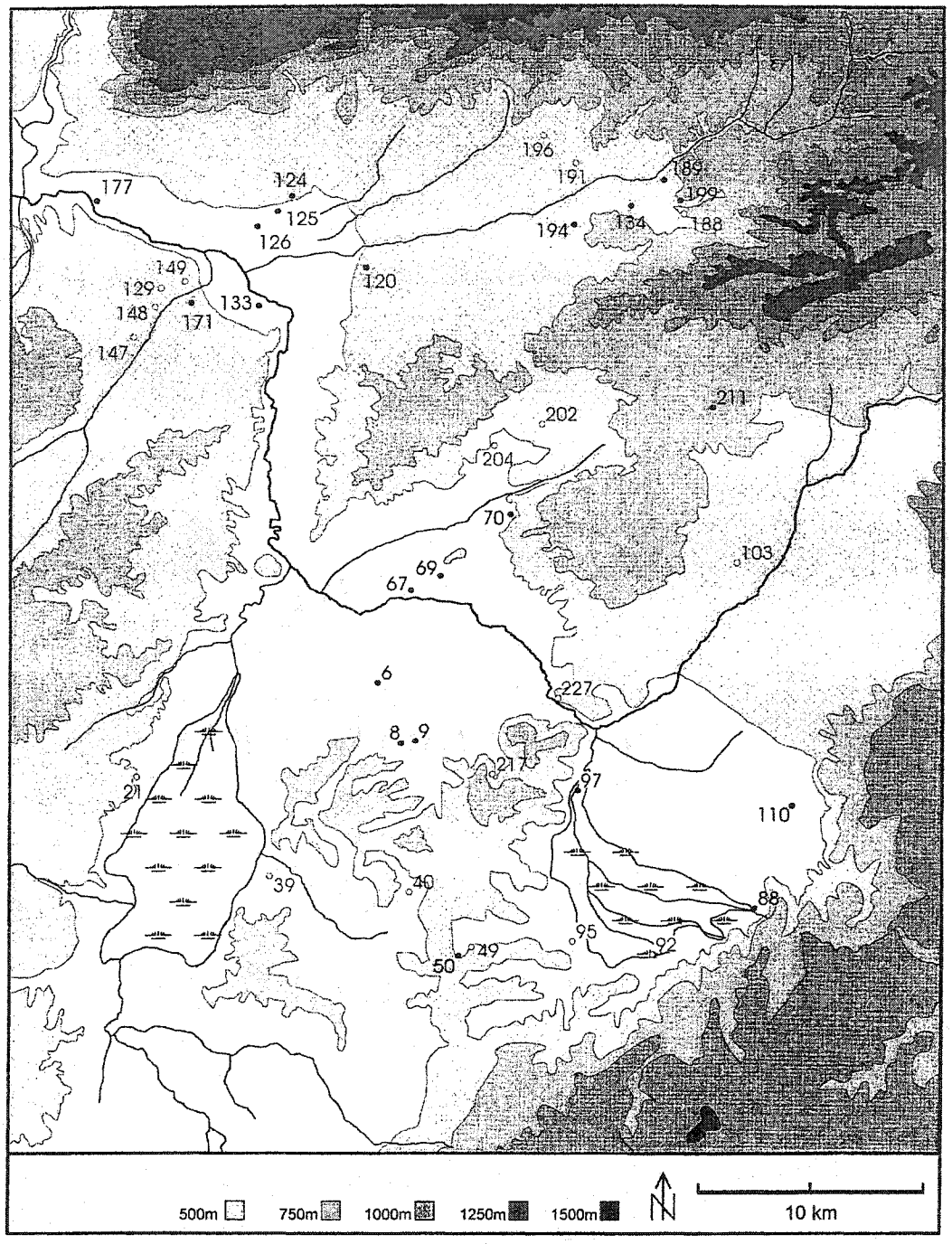


Fig.5.3. Distribution of sites with Neolithic styles of pottery in the Kahramanmaraş Survey Region

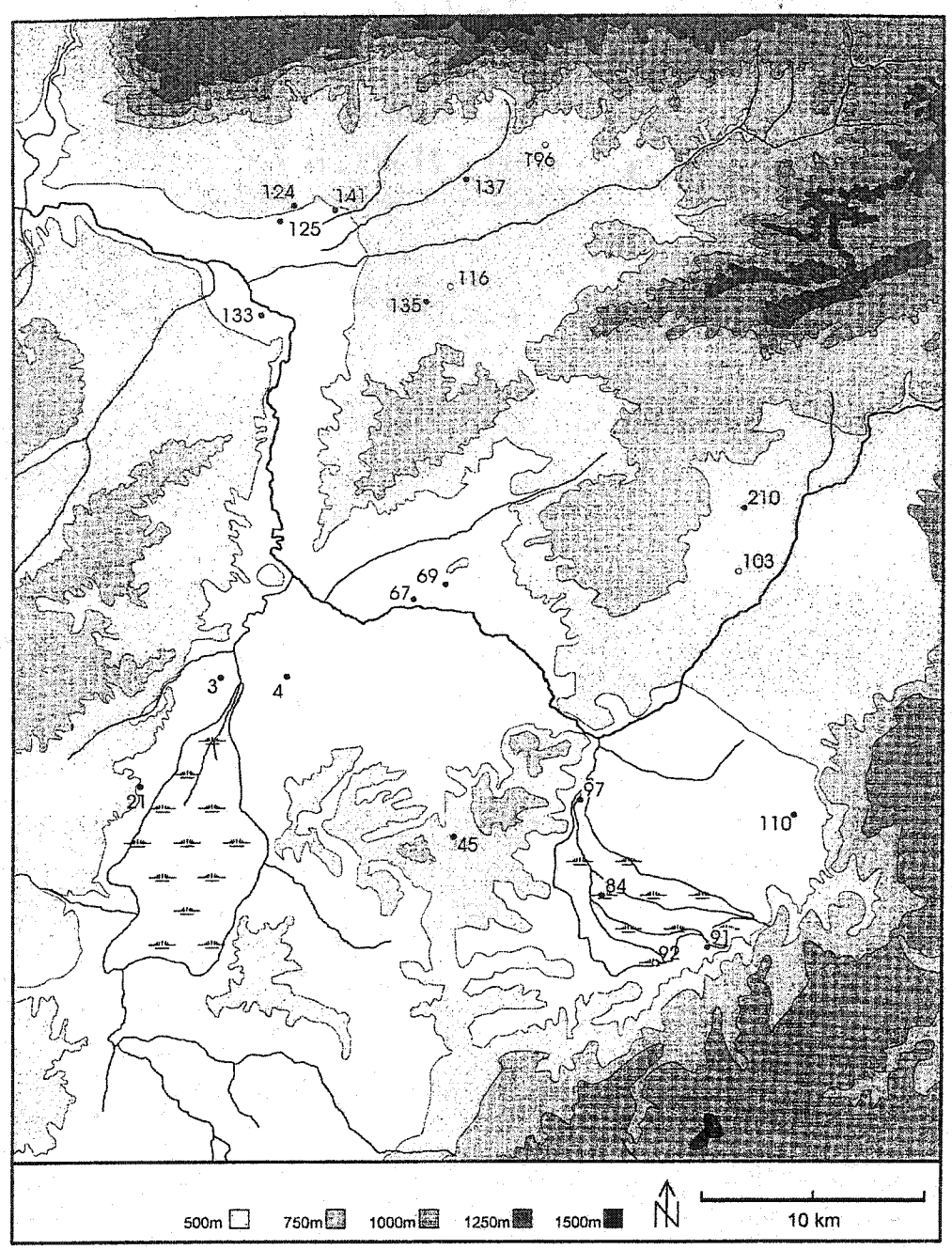


Fig. 5.4. Distribution of sites with Halaf Pottery in Kahramanmaraş Survey Region

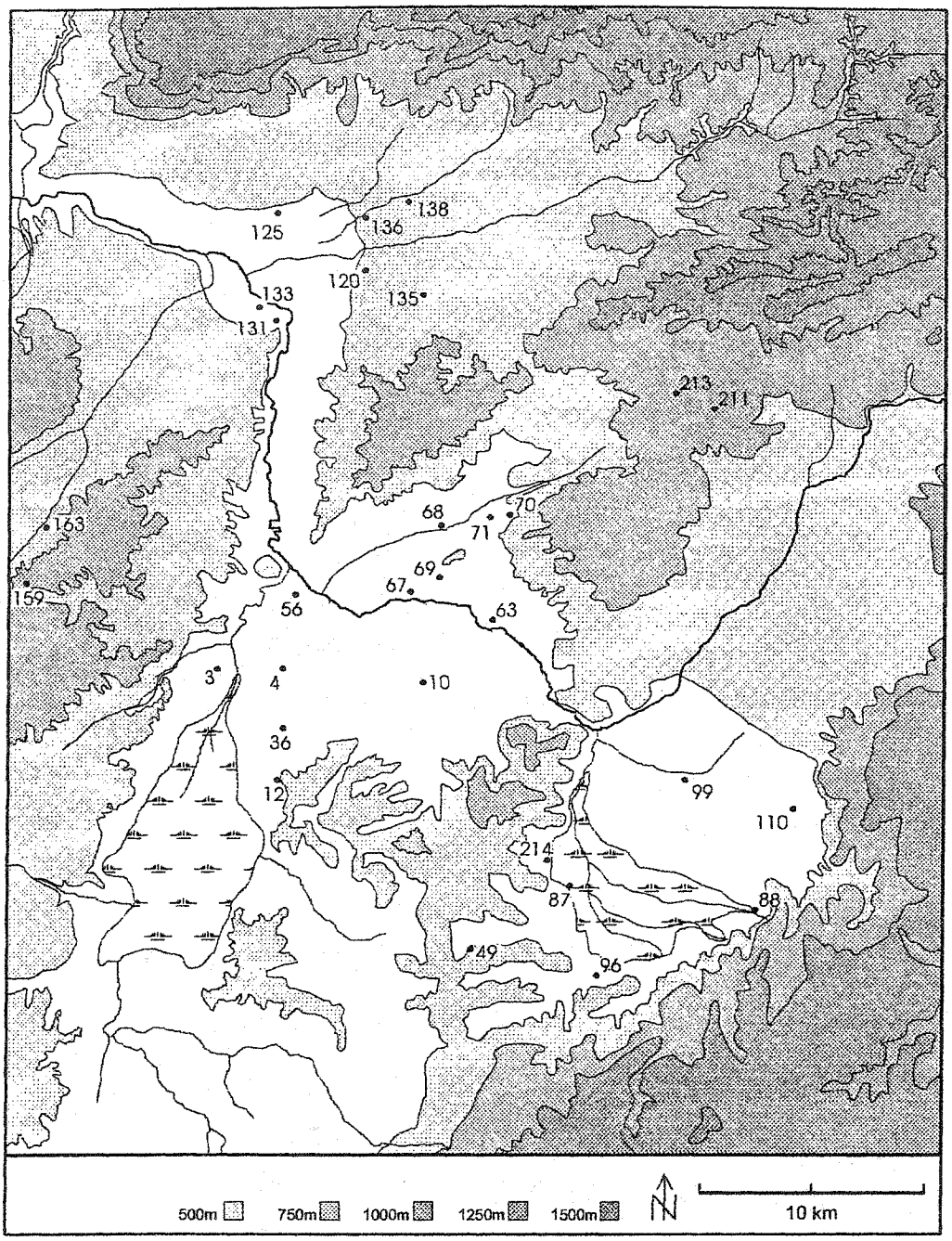


Fig.5.5.Distribution of the Sites with Ubaid Pottery in the Kahramanmaraş Survey Region

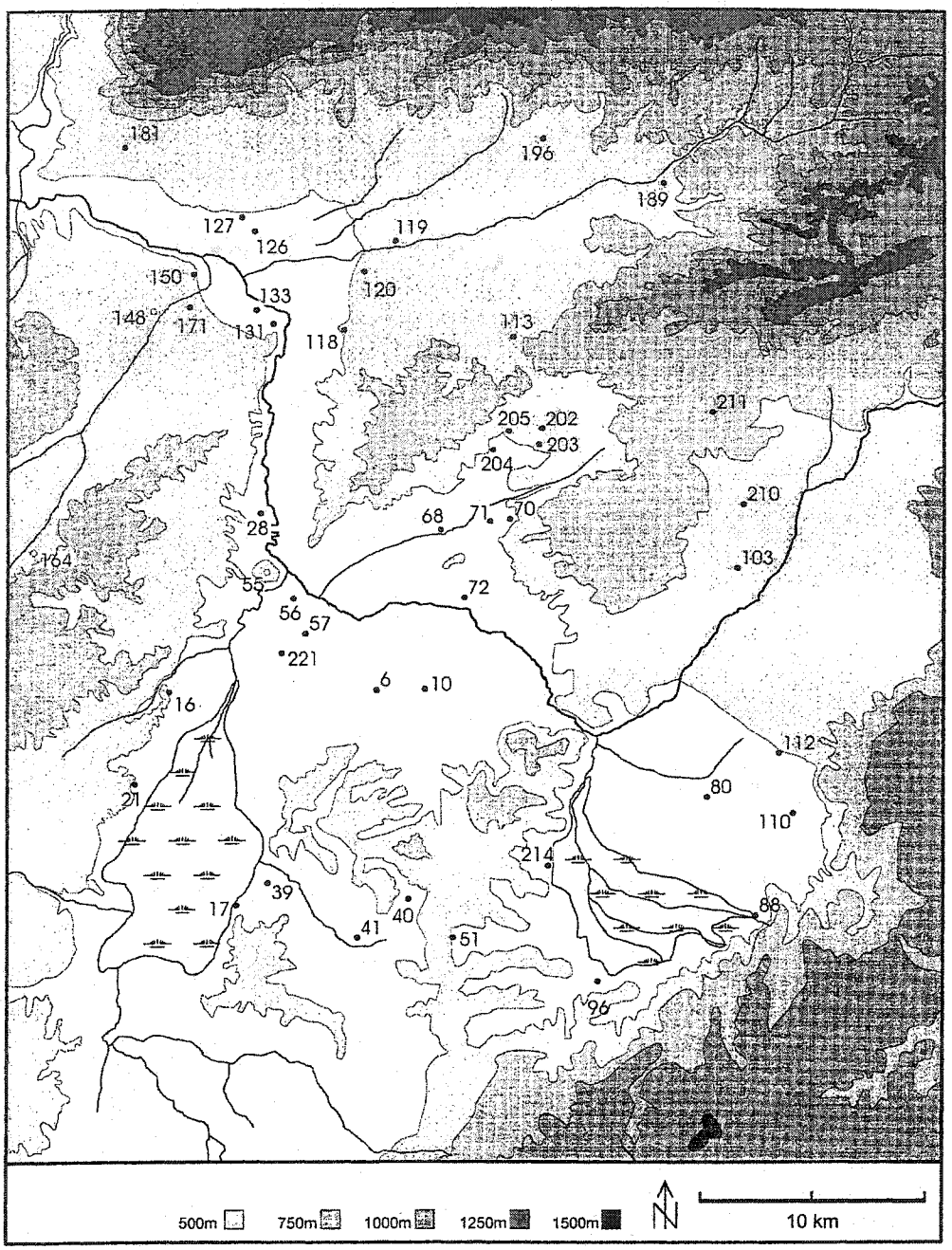


Fig.5.6. Distribution of sites with Late Chalcolithic styles of pottery

in the Kahramanmaraş Survey Region

Hydro-Geological Structure of Site Distribution

The Kahramanmaraş Region saw some extensive drainage projects in the early 1970's. This has changed the landscape tremendously especially in the southern basins of Narlı and the Gavur Lake. Both of these areas were previously covered with large marshes that are now largely drained to open up fertile agricultural lands. While this agricultural reform has revived the region as one of the major cotton producers of Turkey, the situation affected the archaeological and environmental survey projects in both negative and positive ways. The natural state of the land was not easy to investigate because of the drainage canals. Furthermore destruction of mounds within agricultural land has made detection possible only through intensive surveys, which may be difficult to conduct owing to obscuring crop cover.

Fig. 5.7 is a result of the combined examination of aerial photos, satellite images and a hydro-geological map kindly given by the Water Department in Kahramanmaraş. There are two sets of aerial photos: the older dates to 1945-48, the second series dates to 1985-87. The photos are conventional black and white stereoscopic images of 1/30,000 scale. Besides understanding the extent and effects of drainage work within the intervening 40 years, these photos were also instrumental in locating sites that were destroyed or proliferated in that process.

The original hydro-geological map provided by the Water Department was in a scale of 1/200,000. The Water Department in Turkey is one of the most up to date technical agencies with a well-trained crew. The map was prepared in 1970's

immediately before the major drainage work started in Kahramanmaraş. This map records, geological formations and deep profiles intersecting the basin in various angles.

With Chris Hill's help, an interpretation of the map was possible (Hill and Eissenstat 1998). According to the data from a series of cores dug by the Water Department intersecting the Narlı Basin (otherwise referred to as the Southeastern Basin) in a southwest-northeast direction give a basic understanding of the geological formations in this basin. The formation of the Narlı Basin dates back to the major tectonic activities of early tertiary period of the Cenozoic era. Basalt flows on the Tut Mountain immediately to the west and north of Domuztepe follow the line of a fault running in a north-south direction and indicate a degree of volcanic activity here during or after the formation of the above mentioned fault line. Another fault line runs through a series of springs in a southwest-northeast direction at the southern border of the Narlı Basin crosscutting sites KM 92, 91 and 88.

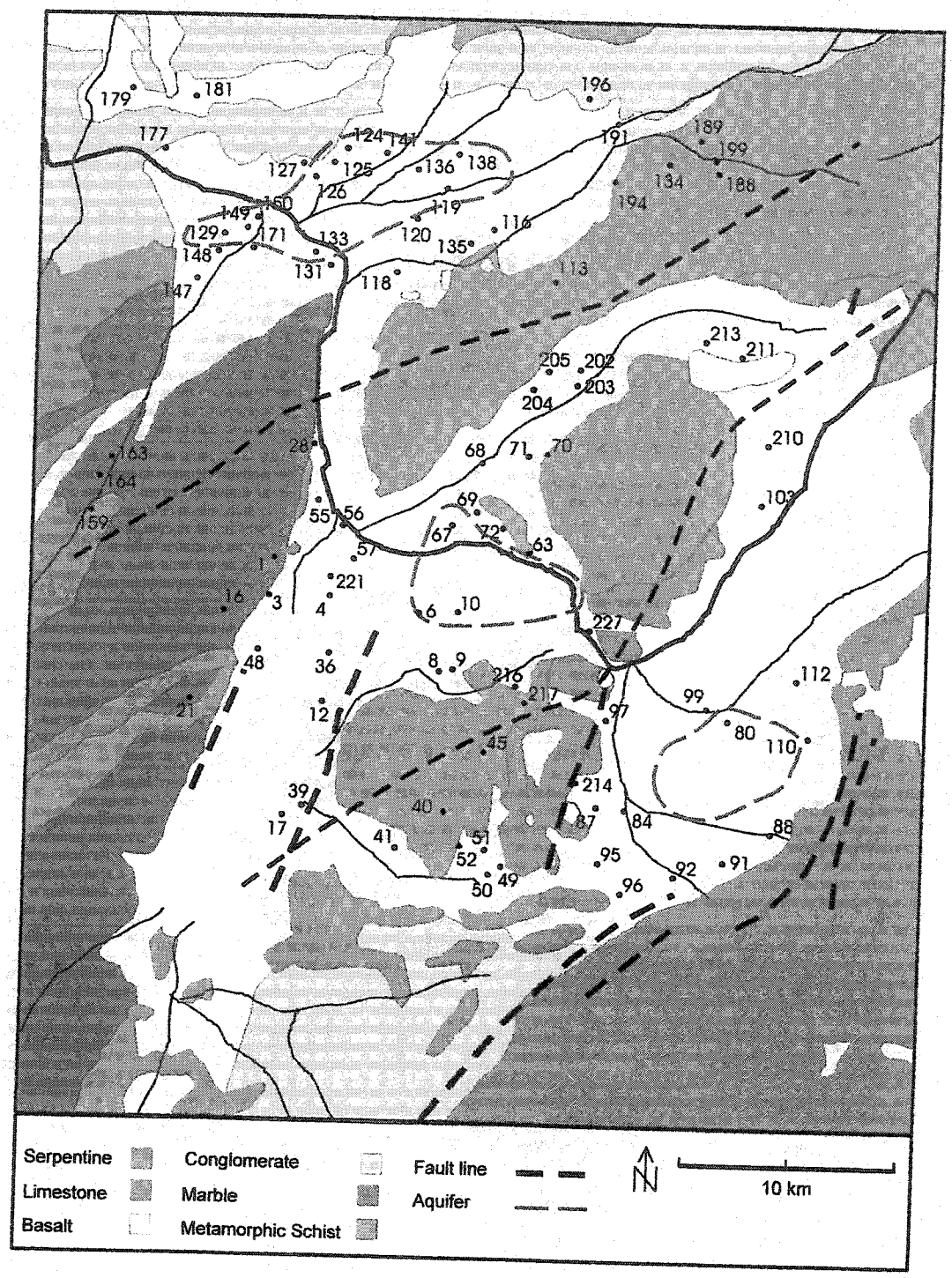


Fig.5.7. Geological Formations and Settlement in the Kahramanmaraş Region

After the formation of the rift, the basin was filled with Pliocene conglomerates, potentially derived from strong river activity. This activity might be ancestral to the modern Aksu River. At this earlier time, the Aksu may have formed a system including the Sakçagözü region and the Gavur Lake Basin. It is not clear whether the Türkoglu Plain may have also been part of this system at this time. However, it is plausible from the hydrogeology map that the Köprüağzı Gorge, near KM 227, was closed when the infilling of the Narlı Basin started and that Türkoglu was left outside the fluvial system. If this was the case, then the erosion of reaf limestones by the fluvial activity at this gorge might have formed the modern Aksu at a later date, perhaps during the early quaternary.

This suggestion seems to be supported by a Water Department core in the North Basin along the Erkenez River. According to the data from this core rifting occurring in an east-west direction created the North Basin in the early Tertiary, potentially rather later than the rifting in the southern basins. Conglomerates of a different kind to those in the South fill in the North basin during the Miocene (earlier than Pliocene). Thus, according to this scenario, the North and the South portions of the region seem to have formed distinct hydrological systems before the quaternary. The Aksu river slowly assumed its modern course after the Köprüağzı Gorge was eroded.

This scenario is supported by the Quaternary sediments of clayey matrix in the Narlı Basin suggestive of a quiet lake or swamp left behind after the Aksu took its modern position. Small channels running from the springs fed this quiet body of water creating further clayey sedimentation. The Aksu on the other hand may have branched out to the Narlı Basin from time to time, as the close examination of the aerial

photographs suggest. Some of the springs such as Karaçay seem to have been stronger than at present and left a denser pattern of fluvial cutting through these sediments during the later quaternary creating the landscape we observe today.

The structural contours of the Pliocene conglomerates that filled the Narlı Basin support the likelihood of the formation of a relatively closed system here with one outlet flowing to Sakçagözü and Gavur Lake Region in the earlier stages before the Köprüağzı Gorge was eroded. The Pliocene river (the ancestral Aksu) must have flowed into the Narlı Basin with high energy filling it in with conglomerates that were accumulated at higher levels than at the edges of this basin. Accordingly, one may assume that the topographical conditions for the formation of the Mizmilli depression were created during the Pliocene. After the Aksu eroded the Köprüağzı Gorge and flowed northwards, springs around the perimeters of the basin took advantage of the existing topography and started filling in the Mizmilli depression throughout the Quaternary in a complex series of episodes. Again judging from the contours of the Pliocene conglomerates, some locations within the depression are higher and Domuztepe itself, sitting at the edge of such a contour, takes advantage of such higher ground.

As the alluvial sedimentation filled in the depression, primarily originating from the southern springs, another condition for the development of marshes was fulfilled. These springs join together to the north of the Mizmilli Depression and flow as a single channel along the western skirts of Domuztepe eventually meeting the Aksu further north.

Geographical Structure of Site Distribution

The discussion of settlement analyses presented in this section is a preliminary to the discussion in Chapter 7. Following a descriptive analysis in this section, Chapter 7 provides models of spatial congruity and temporal continuity in different basin systems of Kahramanmaraş.

The Central Basin

This region is composed of a natural basin called the Türkoglu Ovası (fig. 5.1), which is divided by the river Aksu into two sections, one in the north and one in the south. The site KM 55 marks the northwest corner of the basin where the Aksu makes a sharp turn to flow northwards and eventually joins the Erkenez River. To the southwest the Central Basin merges with the Gavur Lake Basin and, to the southeast, the Köprağzı Demirciler Gorge marks a natural border with the Narlı (or Southeastern) Basin. Once the Aksu river is crossed, possibly at KM 67, the walking route to Domuztepe would have been through the Kelibişler pass. This pass is clearly visible from any point in the Central Basin forming an important visual reference.

A natural route links the settlements of the Sakçagözü area in the south, through the small Emirler (Sakarat) Basin, over the hills through the site KM 45 eventually joining the early sites of KM 8-KM 9 and KM 10 on the southern border of the Central Basin. Possibly this route was connected to KM 67 through a crossing of the Aksu River located at this site. This natural route follows a path through site KM 68 and it links with the northern sector as an alternative to the narrow Aksu valley route. The better agricultural areas of the basin are located on the northern part and southwestern part although most of the basin is quite suitable for agriculture.

The Central Basin

site KM#	Zone	Neolithic	Halaf	Ubaid	Late Chalco	EBA	MBA	LBA	Iron	Hellenistic	Medieval	Artifact Type
1	C							x	x			
3	C		x	x		x		x		x	x	
4	C		x	x			x	x	x	x	x	
6	C	x			x						x	pottery
8	C	x				x					x	lithics & pottery
9	C	x								x	x	pottery
10	C			x	x	x		x	x	x		
12	C			x		x		x				
16	C				x					x		
17	C				x	x	x	x	x	x	x	
21	C	x	x		x	x		x	x	x	x	lithics
28	C				x	x				x	x	
36	C			x		x				x		
39	C	x			x					x	x	lithics
43	C									x		
55	C				x	x				x		
56	C			x	x					x	x	
57	C				x		x	x	x	x		
63	C			x		x	x	x	x	x	x	
67	C	x	x	x						x	x	lithics & pottery
68	C			x	x	x	x	x		x	x	
69	C	x	x	x						x		pottery
70	C	x		x	x						x	pottery
71	C			x	x	x				x		
72	C				x					x	x	
102	C									x		
203	C				x							
204	C	x			x	x			x	x	x	lithics
205	C				x					x		
211	C	x	x	x	x		x	x		x	x	lithics & pottery
213	C			x						x	x	
216	C									x	x	
217	C	x										lithics
221	C				x	x					x	
227	C	x								x		lithics

Table 5.2. Sites of the Central Basin

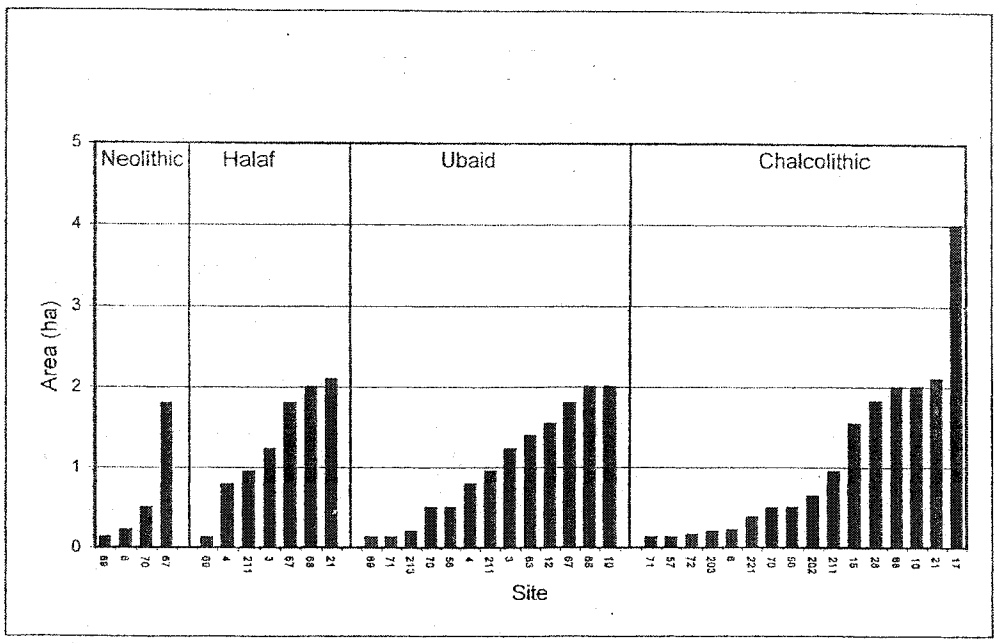


Table. 5.3 Site Sizes and cultural assemblages through time in the Central Basin

All the hills bordering the basin are rich in serpentine associated with chrome. Serpentine was used in local stone bowl and stamp seal manufacture during the Later Neolithic and Halaf Periods. Freshwater springs are located around the Neolithic site of KM 70. In the center of the basin, the existence of an artesian system may be important in the pattern of settlement. Locations of most sites, especially from the Halaf period onwards may have made use of this system. Considering the earlier occupation at KM 67, such a method of water exploitation may have existed by the end of the 7th millennium BC.

The earliest settlement history is most clearly documented at sites KM 8 and KM 9 in the southern sector and sites KM 70 and KM 67 in the northern sector of the basin. The northern sector of the basin has a well-attested settlement development representing successive Halaf-Ubaid and Late Chalcolithic occupation.

All the recorded Neolithic sites such as KM 70, KM 8 and KM 9 were abandoned by the late 7th millennium. This, however, does not represent a wholesale abandonment of the area but rather a difference in the choice of settlement location with a new emphasis on the valley floor. Site KM 67 was occupied at least by the late 7th millennium BC and site KM 69 also has a few pieces of late Neolithic glossy burnished ceramics suggesting occupation at this date. Sites that were emphasized during the 6th millennium may have been located at places known and visited in earlier periods.

In terms of the history of occupation, site KM 67 represents one of the best examples of a continuously occupied late Neolithic site in the region and may have acted as a center of community formation in the Central Basin from late 7th millennium onwards, and throughout the 6th millennium BC. Site KM 67 is at the northern side of the river Aksu, and is equi-distant from both of the Neolithic sites KM 70 and KM 8. The abandonment of sites KM 70 and KM 8- KM 9 cluster may be related to a population movement toward site KM 67. This move away from 7th millennium sites such as 8 and 70, located by freshwater springs, to 6th millennium sites such as 67, located on valley floors between establishes a new settlement zone within which the 6th millennium communities of Kahramanmaraş were structured.

The small site of KM 69 is approximately 2km to the north of KM 67. KM 69 was perhaps occupied in intervals during the 6th millennium BC. The absence of bichromes in a general assemblage of 6th millennium BC ceramics suggests that the Halaf occupation occurred before the later half of the 6th millennium BC, i.e. before the bichrome ceramics made their appearance. KM 69 was reoccupied again at a time period closer to developed

Ubaid. By the time KM 69 was in use again during this developed Ubaid phase, KM 67 was possibly already abandoned or substantially shrunk in its size.

The mid 7th millennium BC site of KM 70 was reoccupied in the Ubaid Period, indicating the reuse of a much older inhabitation area. This reoccupation corresponds to a time period after KM 67 was abandoned. By the Late Chalcolithic, site KM 70 was in use as was KM 71, although not necessarily contemporaneously. At this time, the sites with major Halaf occupations in the area were completely deserted and new locations had been colonized. Late Chalcolithic populations were now concentrated in locations of sites KM 72 and KM 63 and in the cluster of sites KM 202, KM 203, KM 204 and KM 205. The colonization of the northeast during the Later Chalcolithic seen in sites KM 202, KM 203, KM 204 and KM 205 may be related to the opening up of the forests in this area as communication roads to Malatya and the Northeast became popular.

Taken altogether the chronological relations of pottery and the locational relations of long-lived vs. short lived sites suggest a clustering/pairing pattern of settlement characterized by clusters or pairs of sites that were shifting within a defined zone (Chapter 7). Longer-lived sites such as KM 67 acted as community centers that dominated the landscape of community formation. Shorter-lived sites could have split from them with a tendency to return or merge over a period of a few generations. One such community zone is located within the clusters of sites KM 67, KM 69, KM 68, KM 71 and KM 70 circle, as discussed above. The pattern of separation of sites and the probable residential mobility may reflect a technique of land exploitation that made use of extensive dry farming where cultivated land and associated settlement shifted

repeatedly within a 1-2 km radius. The distribution of sites during the early 6th millennium BC may also represent the use of the underground aquifer system in the middle of the basin as suggested previously. The total area of occupation does not dramatically change through the Neolithic and Ubaid Period occupations, although an increase in the number of settlements can be observed (site sizes will be discussed in more detail in the following sections of this chapter).

The view-sheds from prehistoric sites and their observation of natural borders within the basin may be significant. For example, the mid 7th millennium BC site of KM 70 is located at a well-protected, geographically varied zone with access to a spring nearby. It has a dominating view of the Central Basin from the east toward the western horizon. However, a view of the Kelibişler Pass through which the site of Domuztepe (KM 97) was accessible, is not granted. The late 7th millennium BC site of KM 67, on the other hand, is located immediately adjacent to the Aksu, right in the middle of the Central Basin with a much better controlling view in all directions. Most importantly, the Kelibişler passage to Domuztepe is clearly visible although the site of Domuztepe itself cannot be seen because of the natural hills separating the two basins. As noted above, the Halaf period communities of the Central Basin and the Southeastern Basin potentially made use of this route.

The Late Chalcolithic sites claim the geographical perimeter of the Central Basin with emphasis on different boundary or communication routes. The cluster of sites KM 202, KM 203, KM 204, KM 205, for example, lies at a boundary connecting the Central Basin to the Northern Basin. Sites KM 63 and KM 72 control the natural extension of the

Aksu River toward the Köprağzı gorge, which connects the northern portion of the East Basin and the Central Basin.

It is less clear what happens through time to sites such as KM 8, KM 9 and KM 45. Although geographically located within or close to the Central Basin, the river Aksu may, in fact, have served as a major social divide as well as a physical one. The population agglomeration at Domuztepe may have equally attracted these small communities to the Southeastern Basin.

Later in the Ubaid period, sites KM 6 and KM 10 appear in the southern sector of the Aksu river in the Central Basin. At this time the activity around site KM 55 is significant. Sites KM 56, KM 57, KM 221, KM 4, KM 36 and KM 12 now emphasize the passage connecting the Central Basin to the Northern Basin along the line of the modern road to Kahramanmaraş. KM 55 is the largest site in the region with a surface occupational history extending back to the Early Bronze Age. The busy occupation in its catchment area however, indicates that the development here has an earlier history.

The trend toward the end of the Chalcolithic period seems to have been to control natural passages on the perimeter of the Central Basin whereas the earlier 6th millennium BC community of KM 67 preferred a location from where they could have views of the Central Basin and the natural passage connecting them to the Domuztepe community. While the "living" sites of the Late Chalcolithic emphasized new niches and control of different routes within the Central Basin, the "dead" abandoned sites may have structured the living's connection to a conceptually different landscape (Chapters 7 and 8).

As we understand from the ceramic inventory at the 6th millennium sites, the transition from the Halaf to the Ubaid doesn't immediately or uniformly affect location of settlements. After Domuztepe was abandoned, site KM 67 continued to be occupied for a few generations longer while KM 69 was inhabited for some time during the full Ubaid. Significantly however, all these sites were abandoned before the Late Chalcolithic Period.

In most periods, the Central Basin was probably always a locally more important area than the other basins. The growth of Domuztepe in the Southeastern Basin during the early half of the 6th millennium BC may be related to the contingent aspects of local interaction at that time. Closer interactions to the south and west possibly as far as upper Mesopotamia may have made the Southeastern Basin an important mediator for a while. However, this particular interaction route was perhaps not as significant after the mid 6th millennium BC.

The Northern Basin

site KM#	Zone	Neolithic	Halaf	Ubaid	Late Chalco	EBA	MBA	LBA	Iron	Hellenistic	Medieval	Artifact Type
	N				x	x	x			x		
116	N		x									
118	N				x	x					x	
119	N				x	x			x	x		
120	N	x	x	x	x	x		x	x	x		pottery
124	N	x	x				x	x		x		pottery
125	N	x	x	x		x	x	x				pottery
126	N	x			x							pottery
127	N				x	x				x		
129	N	x								x	x	lithics
131	N			x	x	x						
133	N	x	x	x	x					x		pottery
134	N	x										lithics & pottery
135	N		x	x					x	x	x	
136	N			x						x	x	
137	N						x	x	x	x	x	
138	N				x						x	
141	N		x									
147	N	x										lithics
148	N	x			x							lithics
149	N	x										lithics
150	N				x				x	x	x	
159	N			x						x	x	
163	N			x					x		x	
164	N				x	x	x	x	x	x		
171	N	x			x							pottery
177	N	x							x	x		lithics
179	N									x	x	
181	N				x	x		x	x	x	x	
188	N	x										lithics
189	N	x	x		x	x	x	x	x	x	x	pottery
191	N	x									x	lithics
194	N	x									x	pottery
196	N				x	x	x	x	x	x		
199	N	x										lithics
202	N	x			x	x				x		lithics

Table 5.4. Sites of the Northern Basin

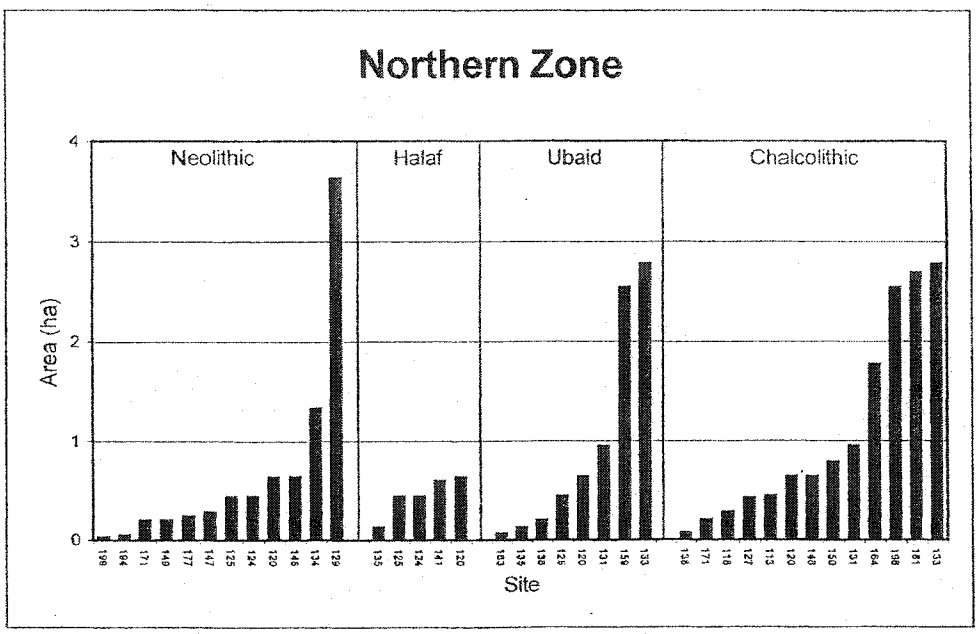


Table 5.5. Site sizes and cultural assemblages in the Northern Basin

The Northern Basin forms the northernmost end of the Levantine rift valley. The Aksu river merges with the Erkenez and the Göksun rivers here, to form the initial tributary of the Ceyhan river that flows to the Mediterranean by the city of Adana. Prior to the colonization of the central portion of this basin, just to the south of the modern city of Kahramanmaraş, sometime at the beginning of the 6th millennium, the evidence suggests that the earliest sites were located along the valley edges close to the springs. There are many lithic sites scattered along both the eastern and western sectors. The absence of evidence in the area between may be due to intensive modern occupation in this part of the survey region.

Similarly to the Central Basin, the settlement pattern for the Halaf Period was established by the late 7th millennium BC. Small sites located within a few km of each other remain within occupational zones, which may merge with others at intermediate

points such as KM 124. Natural divides such as rivers appear to have significance by marking out a landscape within which to settle. The sequential occupation that can be observed in the artifactual assemblages from these sites further supports the nature of regular settlement movement within localities and the continuity of settlement within a given small community territory. The sites KM 129, KM 149, KM 147, KM 148 all are lithic sites, which may represent similar types of territorial formation and potential cyclical occupation in this manner.

Again during the Halaf period, the settlement development suggests a different type of water exploitation that may have made more use of underground water. Zones of potential water extraction through well digging correlate well with the new settlement distribution. This is interesting and may be related to new agricultural and horticultural practices during the climatic dry phase (the climatic context of the time period is discussed in Chapter 6).

Farther to the south west of the Northern Basin, there is an isolated community of made up of sites KM 159, KM 163, KM 164. The sites of KM 120, KM 135, KM 118 are located close to basalt sources. KM 120 is close to a spring as well as to potential underground water resources. These groups of sites are naturally divided from the Northern Basin sites by the river Erkenez. Similarly, the Aksu river separates them from the KM 131, KM 133, KM 171 community.

Compared to the Central and South-eastern Basins, this basin shows some divergences in the development of settlement pattern from Halaf onwards. Communities in this area may have had a much more mobile existence although a potentially more

durable site under later occupations cannot be dismissed. KM 125 was continuously targeted during the 6th millennium, in a similar way to KM 67 or KM97, yet it is much smaller in size. The site may have existed as a pairing with KM 124, which then periodically shifted in between other sites.

The sites 124 and 125 both show further occupation in Bronze Age although the later Chalcolithic is not clearly present in any of the sites. Abandonment of Halaf sites has also been observed in the other basins of the survey region. As will be remembered, the post Halaf to Late Chalcolithic settlement in the Central Basin slowly shifted toward the KM 55 area. It is plausible to suggest that the Northern Basin may have started to gain importance during the Later Chalcolithic and the Bronze Age, specifically forging relations to and from Malatya area where important Late Chalcolithic polities developed indigenously (Frangipane 1997). At this time, communities of this basin may have gone through different processes than the southeastern basin communities.

The South-Eastern Basin

site KM#	Zone	Neolithic	Halaf	Ubaid	Late Chalco	EBA	MBA	LBA	Iron	Hellenistic	Medieval	Artifact type
40	S	x			x	x		x	x	x		lithics
41	S				x		x	x	x	x	x	
45	S		x			x	x	x	x	x		
49	S	x		x	x					x	x	lithics
50	S	x							x	x	x	pottery
51	S				x		x	x	x	x		
80	S				x	x	x	x	x	x		
84	S		x				x		x		x	
87	S			x			x	x	x			
88	S	x		x	x	x	x		x		x	pottery
91	S		x				x	x	x	x		
92	S	x	x				x			x	x	lithics
95	S	x				x				x	x	lithics
96	S			x	x					x	x	
97	S	x	x							x	x	lithics
99	S			x							x	
103	S	x	x		x	x		x	x	x	x	lithics
110	S	x	x	x	x	x				x	x	pottery
112	S				x						x	
210	S		x		x	x	x		x	x	x	
214	S			x	x	x						

Table 5.6. Sites of the Southeastern Basin

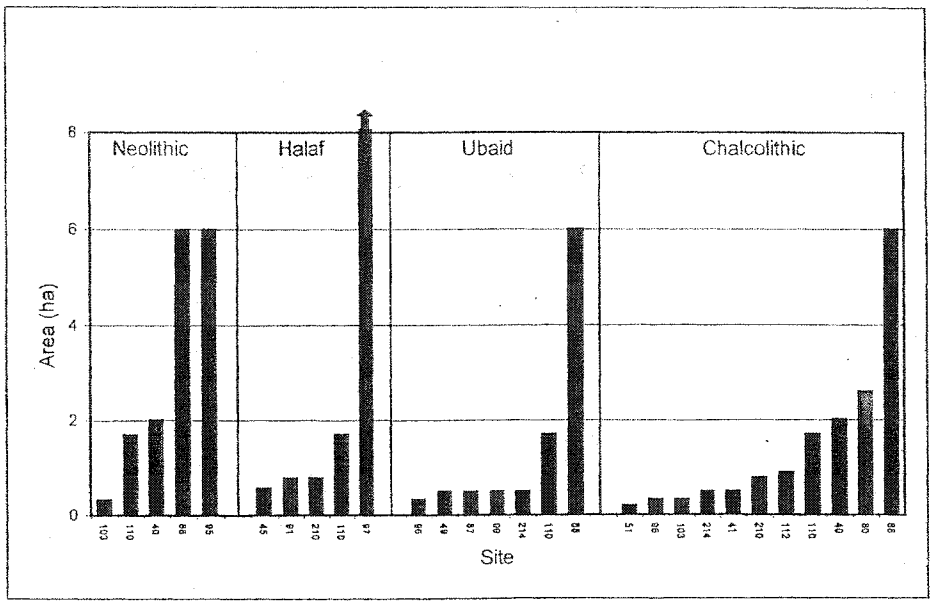


Table 5.7. Site Sizes and Cultural Assemblages in the Southeastern Basin

The Southeastern Basin represents an anomaly because of the size achieved by Domuztepe during the 6th millennium. The surface collection of Domuztepe suggests that the site was settled before the beginning of 6th millennium BC but attained an exceptional size possibly by the start of that millennium.

To the south, lower hills around tectonic springs were occupied since the 7th millennium. With the onset of the 6th millennium settlement, Domuztepe appears to be the center of some nucleation that may have entailed an influx of population from the more remote areas of KM 8, KM 9 and KM 49, KM 50 as well as the sites within the basin itself. It is, however possible that a cluster of short lived sites may have been occupied during the Halaf, situated 3-4 km south of Domuztepe and represented by the sites of KM 84, KM 87 and KM 214.

The Mizmilli marsh forms a remarkable natural border within the local system of Southeastern Basin settlements. Domuztepe is located at the northern tip of this marsh. Tectonic springs in the south slowly run toward the Aksu while continuously feeding the marsh. Old aerial photographs suggest that Domuztepe lay between a branched river running on both the east and west sides of the settlement.

There is a north-south path along the hills bordering the Southeast and the Southwest Basins, possibly providing a short cut avoiding marshes or larger settlements. Sites KM 49, KM 45 and KM 10 are on this route as it runs through the rolling hills. Possible short-lived Halaf occupations here might have been within the catchment of Domuztepe. Domuztepe would have been linked to this system by passes through the low-lying limestone hills. Another route follows through the northern skirts of Tut Mountain via KM 217 and meets the Neolithic sites of KM 8 and KM 9. Otherwise, one can follow the southern line of the Tut mountain complex to reach the sites of the KM 49, KM 45 and KM 10. KM 96 and KM 49 would have linked Domuztepe to the route to Sakçagözü and the Gavur Lake (Southwest Basin).

The Southeastern Basin has a location closer to the direct paths to northern Mesopotamia. However, Domuztepe's location emphasizes its closeness to the Central Basin system rather than simply to the communication paths to Mesopotamia. Indeed nucleation at Domuztepe may reflect a specific concern with emphasizing the natural passage to the Central Basin. To an outsider traveling from the Central Basin through the Kelibişler pass, Domuztepe immediately signals the control of the entry to the Southeastern Basin. The depression within which Domuztepe exists may have extended

this claim throughout the western sector of the basin. Domuztepe, because of its location, may have been an important mediator between the upper Kahramanmaraş survey region and northern Mesopotamia. Domuztepe like other long-lived sites of the survey region (e.g. KM 67, KM 125) was occupied by the late 7th millennium BC, long before the Halaf influence took place.

While Domuztepe's location may have controlled communication to Mesopotamia during the Halaf Period, the initial choice of settlement may rather be related to developments that are more local in nature. A competitive trend might be suggested between the Central Basin and the Southeastern Basin, for example. The late 7th millennium shift in settlement patterns may be related to both subsistence and an attempt to resolve stress through a negotiation of social links to resources embodied in landscape. It is notable that, among the three sites that showed temporally continuous occupation throughout the 6th millennium BC (KM 125, KM 67, KM 97), Domuztepe (KM 97) appears to be the first to be permanently abandoned. Both the sites KM 67 and KM 125 show some representation from post-Domuztepe phases, although both also were abandoned before the beginning of the 5th millennium BC.

The survey collections suggest that this abandonment may have been accompanied by a dispersal that affected the pattern of settlement during the Ubaid Period both in the Eastern Basin and amongst the communities in the adjacent basin. It is possible that abandonment resulted from the large population of Domuztepe causing rapid degradation of the soil around the site (Chapter 6 and 7). On the other hand, Domuztepe's population dispersal may be related to more major general issues, such as

dissolution of ties with northern Mesopotamia. After the 6th millennium BC, although seemingly influenced by the Ubaid period material culture of Mesopotamia, cultural influences that shaped the Kahramanmaraş region in the 5th millennium BC emphasized a north south axis as well as an east-west one (Campbell et al. 1999).

The nucleation in the early half of the 6th millennium BC at Domuztepe does not survive beyond the middle of the 6th millennium BC. The location of KM 96 may be informative in this regard, emphasizing the southwestern corner of the southeastern basin with its natural passage to Sakçagözü, which leads to the Amuq plain. The axis of communication may have been distorted with an increased development of marshes and the routes may have been pushed through the surrounding hills in the east and south of the basin. By the 5th millennium BC, there may have been an increased preference to go through the Central Basin and south through the Southwestern Basin rather than through the Southeastern Basin eventually reaching the Arslan Beli Pass. The particular location emphasized by Domuztepe in the Southeastern Basin may have lost its importance by the end of the 6th millennium BC. However, the eastern and southern perimeters of the basin remained settled.

Obsidian distribution was discussed in Chapter 3. Obsidian obtained from the Central and Eastern Anatolian (with some Caucasian included) sources was a major exchange item during the 6th millennium BC. Elizabeth Healey's analyses show that obsidian was directly obtained at Domuztepe in large quantities ranging from 9-20% of the lithic assemblage (Healey 2001). Although rather prematurely, it may be suggested that Domuztepe was a center for re-distribution of obsidian.

Kahramanmaraş is at a location that marks a major cultural and geographical divide between the Anatolian and Mesopotamian spheres. Domuztepe's location emphasizes both a separation of South-Eastern Basin from Central Basin and a last stop before proper Mesopotamia can be reached via Tell Turlu or Gaziantep. This could have been a major divide in prehistoric times as it is today. It is interesting that this divide is not emphasized at a point along the eastern border of the South Eastern Basin where Mesopotamia is closer. The particular location may suggest a concern with controlling the communication between the Central Basin and South-Eastern Basin. This locally contingent concern may be related to an effort to locate the social group and its symbolic and economic resource base against a competitive one such as the Central Basin communities.

Certainly, when talking about the scale of obsidian distribution, we may need to review further details. Firstly there are many sites both in the Central and Northern Basins, which are located closer to the roads leading to the source areas, especially the ones in the northeast and northwest Anatolia. One exception to this would be the development of a route through the north-eastern branch of Aksu. This branch connects Southeastern Basin to Malatya through which a highway to both Eastern and Central Anatolian obsidian sources could be opened avoiding the North and Central Basins of KM. This route may have been more active in the first half of the 6^{th} millennium BC, resulting in the development of Domuztepe during this time. Later abandonment of the site may then reflect a change in the interaction paths.

As suggested previously, by the Later Chalcolithic, the active routes of the survey region emphasize northeastern Anatolia via the South-western basin running through KM 55 (KM 55 does not have any late Chalcolithic ceramics yet its surrounding area gained emphasis after the 2nd transition in Kahramanmaraş). Although the South-eastern basin is not devoid of occupation at the time, locations of sites such as KM 88, KM 96 indicate that communication was directly running either through the eastern border of the South-eastern Basin directly reaching to Malatya, or through the southern border directly reaching to Amuq.

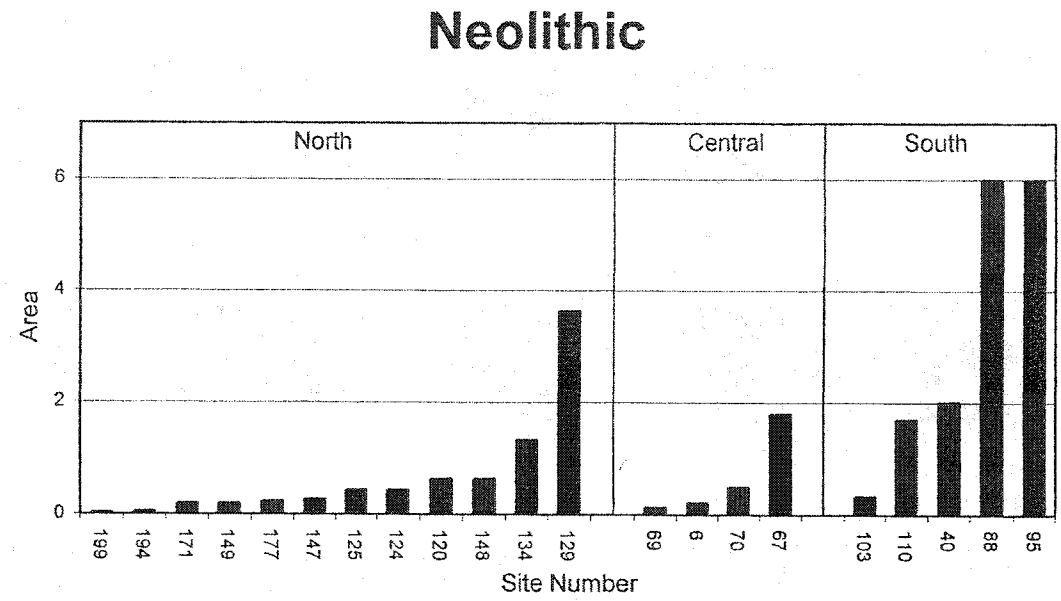
Site Sizes

Site size histograms presented have been prepared on the basis of the modern visible borders of artifact distribution on the surface of the recorded sites. It should be remembered that such an estimate of site size in the case of multi-period mounded occupations is not a reliable pointer as to the extent of settlement at any given time period. Often the earlier occupations are buried under more substantial ones or covered by alluvial deposits that can equally result in low-surface visibility of potentially earlier occupations. In the survey area, it was observed that the mounds may have been dug into the lower levels for a variety of purposes, thus bringing artifacts to the surface. Nevertheless, the surface collections best represent the latest occupations on a mounded site. Number of sites may be more informative in this regard although frequent abandonment and reoccupation cycles may also influence such estimates. Therefore the histograms should not be interpreted to represent size at a given time period. Rather, it

should be read that an archaeological site of certain size has representation from a given time period.

There are cases where prehistoric site size can be readily inferred if the last occupational phase belongs to a prehistoric time period, or covered by relatively minor later occupation. There are such sites in the region, which form the basis for models of mobility and will be discussed in detail.

Table 5.8 presents the data related to site sizes in different basin systems. Northern Basin appears to have been the location of many aceramic occupations, which may represent several different chronological phases. These sites have an average size of less than 1ha. Among those, site KM 129 is interesting with lithics distributed over a surface of 3-4 ha. The better representation of Neolithic sites in the Northern Basin may be related to one of two factors; geographically varied and rich nature of various environmental resource bases may have made early Neolithic subsistence successful in



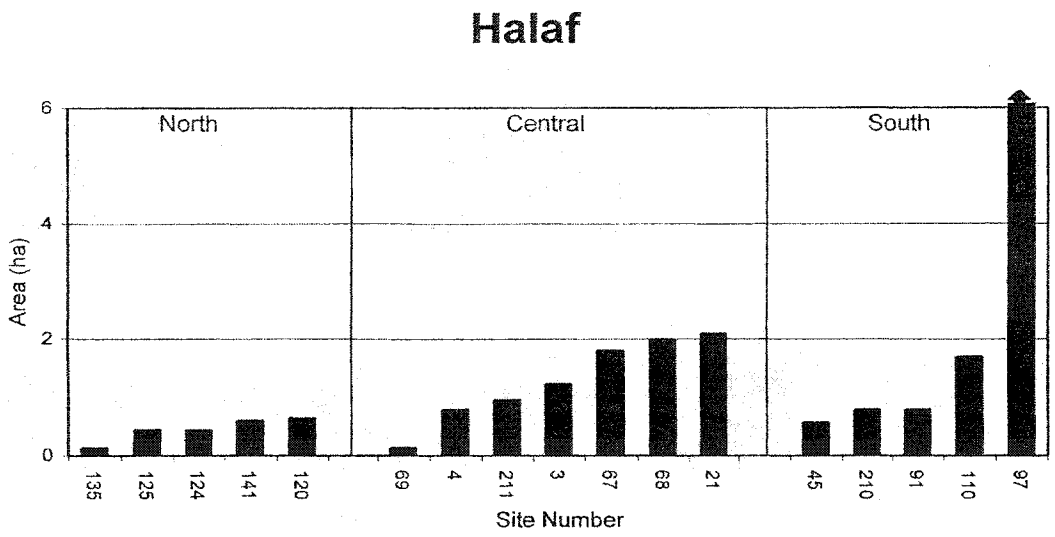
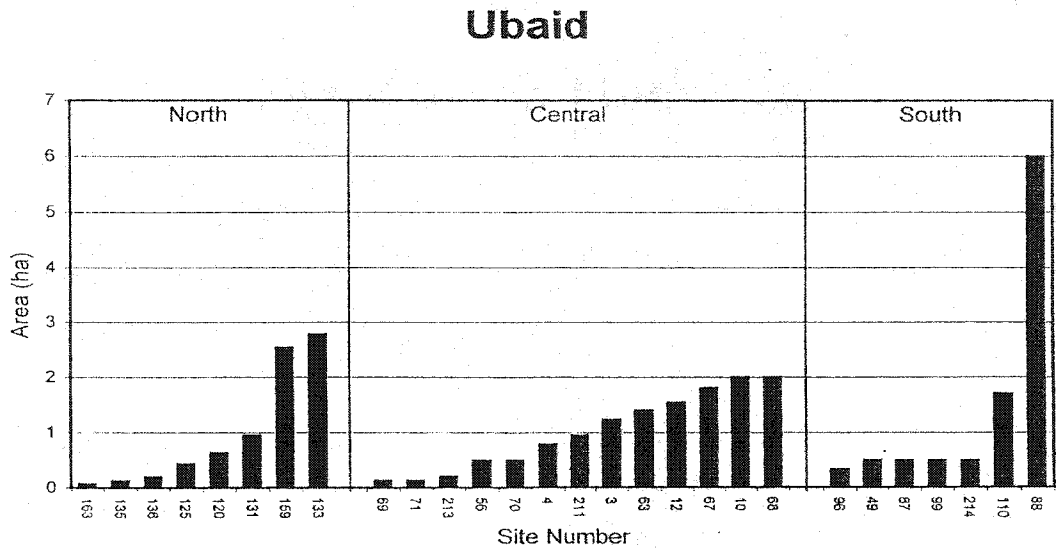


Table 5.8.a. Site Sizes at sites with Neolithic and Halaf ceramics



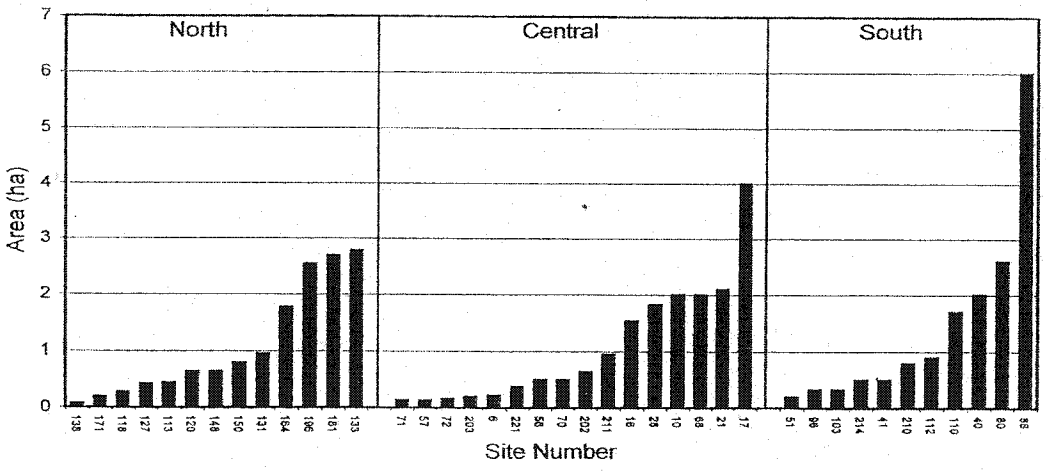


Table 5.8.b. Site Sizes at sites with Ubaid and Chalcolithic ceramics

this part of the region. The other possible reason is that the areas where these sites were found are on higher grounds potentially less affected by alluviation.

The Neolithic evidence in the South-eastern Basin is from multi-period sites. In the Central Basin, on the other hand there are a few Neolithic sites with last phase of occupation dating to 7th millennium BC. Specifically sites KM 8 and KM 70 are in this category. Their sizes are comparable to the lithic rich sites of the Northern Basin. Sites KM 69 and KM 67 have representation from the 7th millennium however their last phases of occupation dates to mid to late 6th millennium BC. Therefore, the size given for these sites is a better indication of the 7th millennium size rather than the 7th millennium.

Sites with Halaf Period ceramics present a faint degree of differentiation in sizes specifically in Central and South-eastern Basins. Missing evidence in the Northern Basin may be related to a variety of factors, an important one being the city sprawl. Sites 125, 124 and 120 continue to be occupied or visited in Halaf Period. Sites 67 in the Central Basin and site 97 (Domuztepe) in the South-eastern Basin became major attractors for population agglomeration and permanence in occupation during this time. Site 125 in Northern Basin also represents a degree of longevity in focus, however the site is smaller than 97 and 67. KM 8 and KM70, two important sites of the 7th millennium Neolithic were both abandoned by the late 7th mill. BC in favor new locations close to river beds represented by 67, 125 and 97. The fact that all of these long-term focus sites of the 6th millennium BC have representations from the late 7th millennium ceramics suggests that their locations may have gradually became more important while the site KM 8 and KM 70 were perhaps still in use.

Toward the 5th millennium BC (Halaf-Ubaid Transitional and Ubaid Periods), specifically the numbers and locations of the sites gradually start to change. Sites 97 and 67, two of the major Halaf occupations were abandoned at this time. However a multi-tiered settlement hierarchy becomes much more pronounced by the Later Chalcolithic rather than the Ubaid Period. The last period of occupation on KM 96 in the South-eastern Basin, dates to an immediately Post-Domuztepe (within Halaf-Ubaid Transitional) phase.

There would appear to be an increase in small number of settlements during the Ubaid period. Considering the nucleation in a large site such as Domuztepe during the Halaf Period, this increase is very likely to correspond to a population dispersal from previously nucleated sites rather than a population increase. During this dispersal process, the Central Basin may have received some of the previous population of Domuztepe.

A general trend cannot be seen during the 6th millennium toward growth of a site-size hierarchy. During the Ubaid period, a three-tiered hierarchy in settlement is only visible in the Central Zone. Only in the Late Chalcolithic, do all zones represent a more comparable pattern to each other with a potential standardization of site hierarchy.

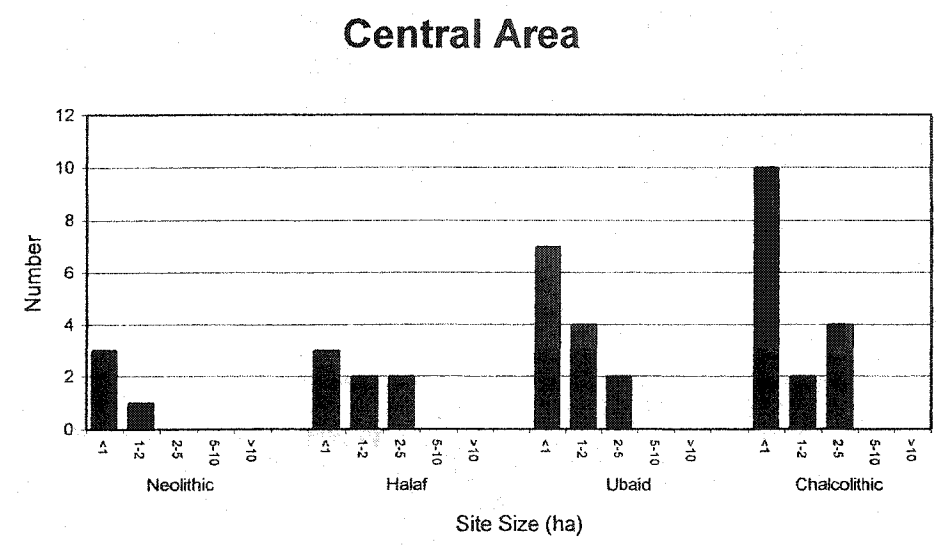


Table 5.9.a Frequency of different site sizes in Central Basin

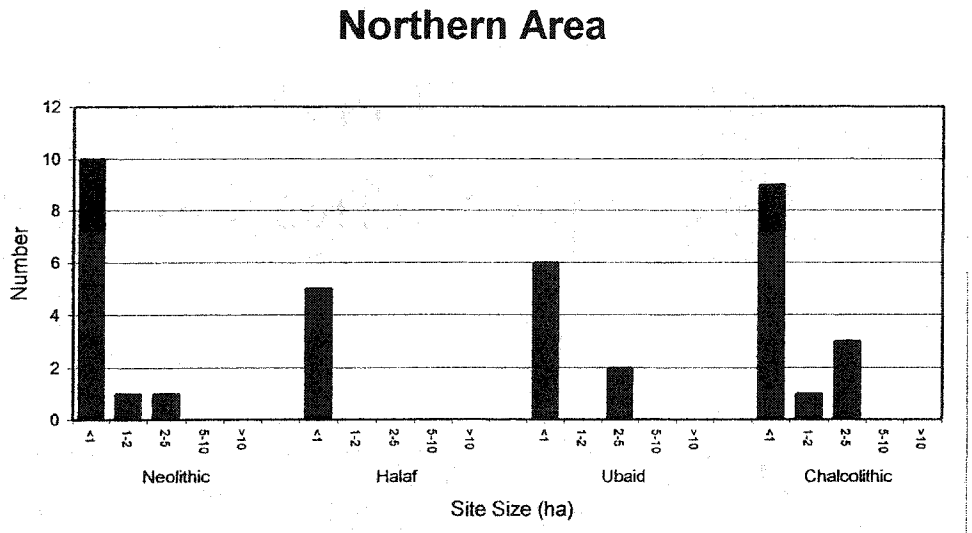


Table.5.9.b Frequency of different site sizes in Northern Basin

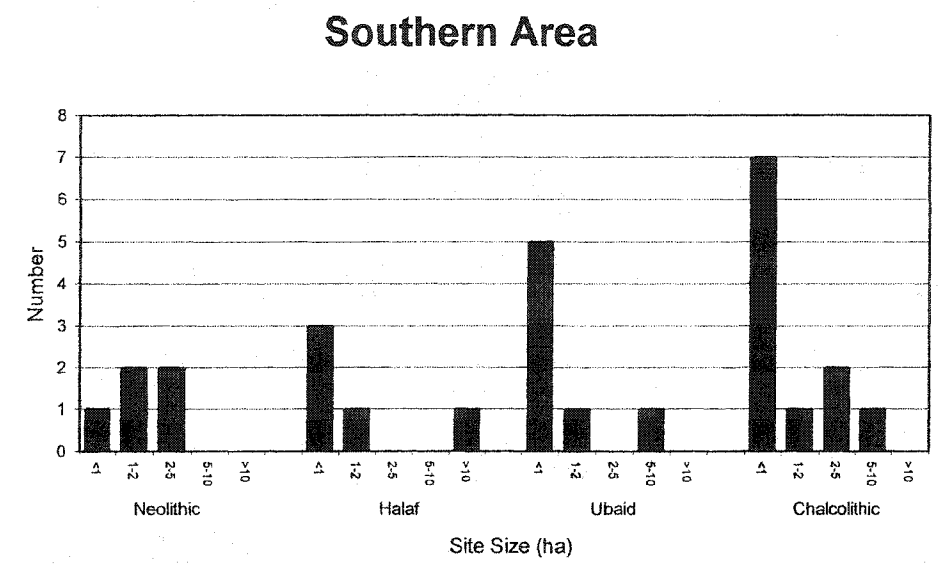


Table 5.9.c Frequency of different site sizes in Southeastern Basin

Synchronic Trends in a Diachronic Perspective

We can be surer of some patterns emerging at each of the basin systems, simultaneously and independently. Therefore the following discussion will emphasize this comparative synchronic frame between the micro-regions in an attempt to construct the overall patterns. In the light of the analyses presented in this chapter, the following developmental pattern can be suggested as an underlying context to be discussed later in Chapter 7. Based on the patterns introduced here, I propose models of synchronic variation and diachronic change in Chapter 7.

1) Developed Sedentism in the Basins:

An establishment of long-term emphasis on settlement zones is perceivable during the 7th millennium in three sub regions. Visible geographical markers creating self-

contained systems within three basins divide these regions: Northern, Central and South-eastern Basin. The South-western basin is largely devoid of occupation during the earlier prehistoric occupation possibly because of a marshy lake here. Sites can be seen to cluster and pair (e.g. KM 8 and KM 9), utilizing ecologically varied niches around the edges of the basin systems close to hills. The sites KM 110, KM 8 and KM 70 represent the earliest ceramic occupations in the region. Social and economic practices may have already marked a landscape upon which 6th millennium sites developed.

2) The First transition: Whereas the earlier Neolithic sites made use of ecologically varied niches, the later 7^{th} - early 6^{th} millennium is marked by a nucleation of the 7^{th} mill. settlement toward locations emphasizing natural geographical boundaries between communities (eg. KM 67, KM 97, KM 125). The new locations also suggest a new technique of water exploitation by making use of extensive aquifer systems present in each basin during the 6^{th} millennium compared to the systems based on spring head locations of the 7^{th} millennium ceramic sites. Site sizes remain small with no immediately identifiable hierarchy except the enormous growth of Domuztepe in the South-eastern Basin during the 6^{th} millennium B.C.

During the Neolithic, the Northern basin appears to have many Aceramic occupations, which may have existed at different phases. All three basins, however have representation of occupation with the inception of pottery phases. The number of sites and total area of occupation increase in Halaf and agglomeration at Domuztepe takes place during the first half of the 6^{th} millennium BC.

3) Establishment of Community Zones with sequential occupation:

Following the first transition a degree of stability is observed in continuous occupation of sites such as 97, 67 and 125. Each of these continuously targeted sites is located in a different basin system potentially dominating the community formation around their close vicinity. The closest contemporary sites (67-69 in the central basin) to Domuztepe are at least 12 km away and on the other side of the river Aksu, making a frequent contact slightly difficult. Therefore each of the communities represented by the long-lived sites of 67, 125 and 97 appear to be self-contained in social and economic regards.

Communities of the 6th mill. BC exhibit a degree of residential mobility within a locality as suggested by the assemblage complementarity between closely associated sites of a locality. The pattern may be related to shifting agriculture and soil exhaustion equilibriums as well as social concerns with control of land and its resources. The sites can be differentiated as long or short lived, on the basis of their history of occupation. Usually one site in each basin presents a longer history of occupation and may be in some senses more important then others. These may be seen as the dominating sites of the community formation and will be discussed in light of the theoretical orientation in Chapter 8. Residential mobility could be in terms of a periodic movement such as parting with a tendency to come back to the dominating settlements. By this practice of residential mobility, a community zone may also have been established and protected.

The overall pattern during the first half of the 6th millennium suggests that although there is residential shifting taking place, a longer lived type of settlement

continues to be a dominating location to where groups returned and reoccupied during the Halaf Period. The Halaf Period settlement patterning was largely structured by the end of the 7th millennium BC with agglomeration of social groups in relatively close association of each other.

Shorter-lived sites existed from time to time around dominating sites of 67, 97, and 125 due to shifting patterns of residence. Yet, the originating sites were probably never left completely deserted during the first half of the 6th millennium BC. On the other hand, even in the case of a complete desertion, the sheer deposit of tell, abandoned houses or other features left on site may have marked a place to where groups eventually returned. Despite movement, links to a previously marked locale and its maintenance by continuous or repeated occupation appear very strong.

4) The Second Transition: Abandonment and Dispersal:

A slow rupture in this pattern takes place toward the end of 6th millennium with colonization of new locations and the abandonment of previously identified settlement zones by the time of the late Chalcolithic. KM 97 (Domuztepe) is the first in the series to be abandoned, 67 was abandoned slightly later than 97. While this pattern occurs gradually, affecting different communities at different times, Domuztepe's dispersal during the final phases of Late Halaf occupation gives the earliest sign of this region wide transition.

The major effects of this transition on settlement patterns are not clear before the end of the 6th millennium BC, however. Earlier 6th millennium BC sites in the Central and Northern Zones may have continued to be occupied intermittently (e.g. 67). This

pattern appears similar in nature to the periodic residential mobility of the Halaf Period yet with a clear tendency to progressively abandon the previously identified dominating sites of the earlier 6th millennium BC. Domuztepe's population dispersal may be due to the instability of a large population in the existing environmental and social conditions. Large sites do not come into existence again in Kahramanmaraş before the third millennium BC.

The Ubaid pattern on the other hand reflects the final stages of a population dispersal and abandonment of the previously occupied Halaf sites. The total occupational area compared to the Halaf occupational area is not affected during this dispersal. While some sites such as Domuztepe were abandoned earlier, sites such as 67 continued to be occupied a few generations longer. Thus, the transition was of some duration effecting different areas in different phases of the later 6th millennium BC.

Dispersal of Domuztepe's population must have affected not only the South-eastern Basin but perhaps also the surrounding areas. Occupational area of the Ubaid in the South-eastern Basin does not exactly correspond to the Halaf size of Domuztepe. Specifically the Central Basin may have received some of the dispersal from the South-eastern Basin. This development of the Central Basin is significant since it is in this area that the Bronze Age centralization at KM 55 takes place. The Central zone is an agriculturally richer area and the repeated 6th millennium occupation at KM 67 while dispersal was taking place at Domuztepe may be significant. The Central area is at an intersection controlling various geographical routes through narrow passages and also protected by forests, rivers and hills on all sides.

Sites such as 124 and 125 in the Northern basin have both Halaf and Bronze Age occupations. It may, therefore, be suggested that a geographical shift took place in which the focus of settlement moved from the Southeastern basin to the North and Central Basins. This may suggest that the east-west path crossing the Northern basin and north-south path crossing both the Northern and Southwestern Basin crossing KM 55 in the Central Basin may have gained importance. The development of such a pattern appears to correlate with the idea that the Kahramanmaraş Region started to belong to a different interaction sphere than that of Mesopotamia.

Contemporary Landscapes of the Halaf Period:

This section is preliminary to a more detailed discussion in Chapter 8. Here, I highlight the similarities in the observations made in a variety of contemporary landscapes. In Chapter 7, I will consider the interpretive implications of these comparisons in more detail within the context of a settlement model that I propose for the Kahramanmaraş Region.

Studies in various parts of Mesopotamia indicate broad trends in settlement patterns with correspondences to the landscapes of prehistoric Kahramanmaraş. In a qualitative discussion a few significant parallels can be suggested.

Later 7th millennium shift in settlement patterns:

Settlement patterns of the Halaf Period landscapes were observed to have been set in the later 7th millennium before Halaf ceramics became popular over Northern Mesopotamia. While there is a transition in settlement in all regions of the North at this

time, the nature of this transition varies from one area to another. For North Iraq, both Campbell (1992) and Wilkinson (Wilkinson 1990b, Wilkinson and Tucker 1995) suggest that the local development of 6th millennium settlement patterning was set in Hassuna II/III phase associated with a gradual dispersal on the valley floor. A similar trajectory was observed in the Khabour, where all Halaf sites continued to be inhabited or were repeatedly re-occupied for millennia following late Neolithic (Lyonnet 2000). In these regions, most Halaf Period sites appear to be founded on previously unoccupied soil. However, no substantial study compared continuity represented in some sites in relation to the new or short term occupations. Chapter 7 will address this problem while a different vision of landscapes will be employed that has potential to reframe some of the problems discussed here.

In North Iraq and most of Mesopotamia, the later 7th millennium BC corresponds to the inception of earliest painted pottery traditions known as Hassuna and Samarra. In this regard, the development of a new settlement pattern in context of wide spread distribution of symbolically rich ceramics over Mesopotamia is significant for North Syria and Iraq. The Pre-Halaf in Kahramanmaraş may be reflected in the evolution of local ceramic traditions. Unfortunately, we have very little to demonstrate a convincing sequence that could connect local ceramics to the Halaf ones. Chapter 4 indicated that there are reasons to suspect that a gradual evolution should have taken place. On the other hand, a shift in settlement is perceivable at the end of the 7th millennium in Kahramanmaraş similar perhaps in nature to its contemporaries.

Changing climate and subsistence may have contributed to the situation and will be discussed in detail in Chapter 7.

Distribution of sites:

Both in the Balikh (Akkermans 1990) and North Jezira (Wilkinson and Tucker 1995) site densities appear low in early Halaf whereas the later Halaf is characterized by a strong increase in number of sites. During the Halaf-Ubaid transition on the other hand, there may be differential developments. In Balikh site numbers were reported to decrease.

In the Khabur during the Halaf period, sites were reported to be evenly distributed in the survey region. Halaf Period sites, as suggested before, closely adhere to a band of terrain above 200-250 mm isohyet annual rainfall limit for successful dry farming. Both in Balikh and Khabur, the density is reported to decrease toward the south where risks involved for rain-fed farming may increase. In Kahramanmaraş an even dispersal can not be confirmed. However, a potential population increase or large scale sedentism can be inferred. Site density is difficult to determine for the mounded sites. As I previously discussed, it is difficult to make estimates of the density of sites in a given time period in Kahramanmaraş. There are discernible principles however, which will be highlighted in Chapter 7.

Shifting of small temporary sites and permanence of large sites:

As a general rule most Halaf Period sites are reported to be small in sizes and shifting in occupation although it is difficult to understand the frequency and range of such shifting. Arjoune for example, in the Homs area of Western Syria consists of three flat mounds (Marfoe et al 1981) with no substantial architecture but shallow pits, ash

lenses and floor surfaces. This site also has very little painted pottery (about 5%). Umm Qseir is a 0.15ha site (Hole and Johnson 1987) and has been interpreted as a short term with specialized subsistence activity.

At this time while majority of sites remain small, a few recently have been reported to reach a size of more than 10 ha. (e.g. Mounbateh, Nisibeen, Takyan, Kazane and Domuztepe). Algaze (1991) reports that Halaf sites in Tigris are mid to late Halaf in date. The 12 ha site of Takyan was located on the Surik Deresi in the center of the Plain. Such site size was noted in the Balikh for Mounbateh (Akkermans 1993), and Kazane in Urfa (Bernbeck 1999) as well as Domuztepe. Tell Kurdu in Amuq Valley is a site with a large Halaf Period (10-15 ha) and a contracted Ubaid Period occupation (2-4 ha.) in a topographically different area of the tell than that of the Halaf Period occupation (Yener et al. 2000). The continuity of occupation is difficult to assess in between, however an interesting parallel to Domuztepe exists that the Halaf Period occupation was abandoned in favor of a much smaller occupation during the Ubaid Period.

In fact, these sizes may be comparable to south Mesopotamian contemporaries at Eridu in the Early Ubaid (Wright 1981) and Tell 'Uqair (Lloyd and Safar 1943, Adams and Nissen 1972). In the North, some of the longer lasting settlements however may also have been occupied in intervals and in varying population densities such as Domuztepe (Chapter 6). Four mounds of Sabi Abyad (Akkermans 1990) in close vicinity of each other, mounds of Sakçagözü to the south of Kahramanmaraş (Garstang 1908, 1937, DuPlat Taylor 1950), or Yarım Tepe (Merpert and Munchaev 1969-1993) mounds can

further be suggested as examples of shifting occupation of sites appearing in clusters (Chapter 7).

Settlement continuity or abandonment in Later 6th millennium BC:

Most Halaf Period sites in the Khabur were also occupied in Uruk and in subsequent periods. The site of Kurban Höyük with Bronze Age occupation had substantial Halaf settlement with approximately 5 more Halaf sites around it all less than 2ha in size (Wilkinson 1990c). Similar continuity can be observed in North Iraq. For example, in North Iraq smooth and continuous development is reported leading to the nucleation at Tell al-Hawa (Wilkinson and Tucker 1995). At Tell Kurdu while the site continued to be occupied in a smaller size during the Ubaid, it was nevertheless abandoned before the end of the Later Chalcolithic (Yener 2000).

Akkermans suggests (1990) that before the Later Chalcolithic most 6th millennium sites were abandoned in Balikh. Mounbateh the largest Halaf period site in Balikh, potentially an agglomeration of 6 topographically distinct mounds, was in a process of abandonment in the latter part of the 6th millennium. Nucleation at certain sites with potential earlier Halaf Period occupations may have taken place while a majority was abandoned.

In Kahramanmaraş, neither the long term nor the short-term Halaf period occupations give any indication of substantial Ubaid inhabitation. The sites examined also did not yield any Uruk presence. Some sites such as KM 67 and KM 69 have some Ubaid ceramics. KM 96, 10 and 133 are the sites with more substantial representation

from Ubaid. Only in the Northern Basin, the Halaf sites 124 and 125 may have been occupied/used in Bronze Age although the extend of this occupation is not understood.

In Kahramanmaraş, there are a few long-term sites occupied throughout the 6th millennium whereas there are a large number of short-lived sites associated with long-term sites. The shifting pattern may have started as early as late 7th millennium BC when the repeatedly occupied sites were established.

In the following sections, I will examine the processes of abandonment at the site of Domuztepe. In Chapter 7, I will particularly focus on the environmental and social context of the 1st and 2nd transition with special emphasis on the influencing factors of mobility during the 6th millennium BC. Chapter 7 will bring together the discussions around models through which I explore social dynamics of spatial congruity and temporal continuity form social and economic perspectives.

Chapter 6

Domuztepe's Surface Collection: Intra-Site Patterns of Spatial Congruity, Temporal Continuity and Abandonment

This section focuses more closely on the Southeastern Basin and on the site of Domuztepe. It attempts to explain the spatial characteristics of community formation within the regional trends described in the previous chapters. After an interpretive discussion of the surface collection of Domuztepe, a statistical analysis of the final occupational deposits in relation to the Late Halaf ceramic chronology is used to understand the patterns of spatial congruity, temporal continuity and the abandonment of Domuztepe.

The present site of Domuztepe covers an area of approximately 20 ha and rises to a maximum height of 12m. above the alluvial plain. The true extent of the site is supposedly somewhat greater. Gradual alluviation has covered the lower slopes of the site while more recent agriculture has truncated portions of the site, particularly in the east and south. In 1995, Dr. Stuart Campbell, co-director of the Domuztepe excavations, designed a collection strategy in which a stratified systematic random sample was selected (Campbell et al. 1999). The site was divided into a grid of 50 by 50m squares. In each square, 2 sample grid points were chosen at random. A restriction was placed on the random choice, to help ensure more even coverage, so that adjacent grid point could not be selected. A stake was placed at the grid point and a 4.37m rope was used to mark a collection area of $60m^2$ at each point. Although this meant almost 5% of the gridded area

was collected, some areas were not suitable for collection due to crops and the portion of the site collected was closer to 4%.

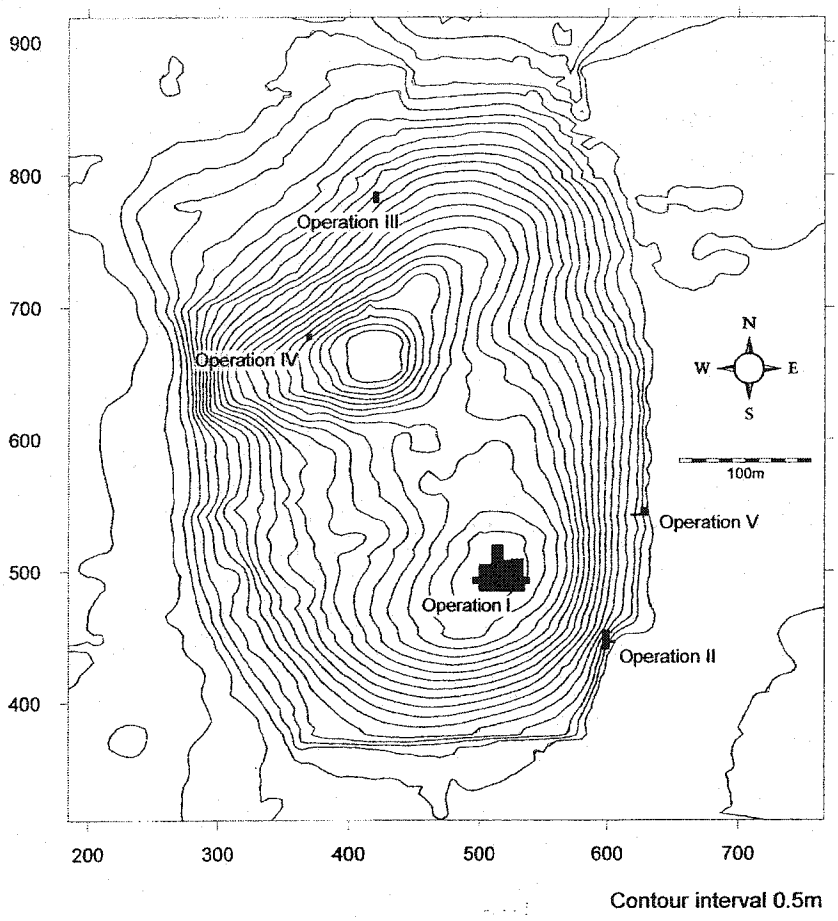


Fig.6.1. Locations of excavated areas on Domuztepe

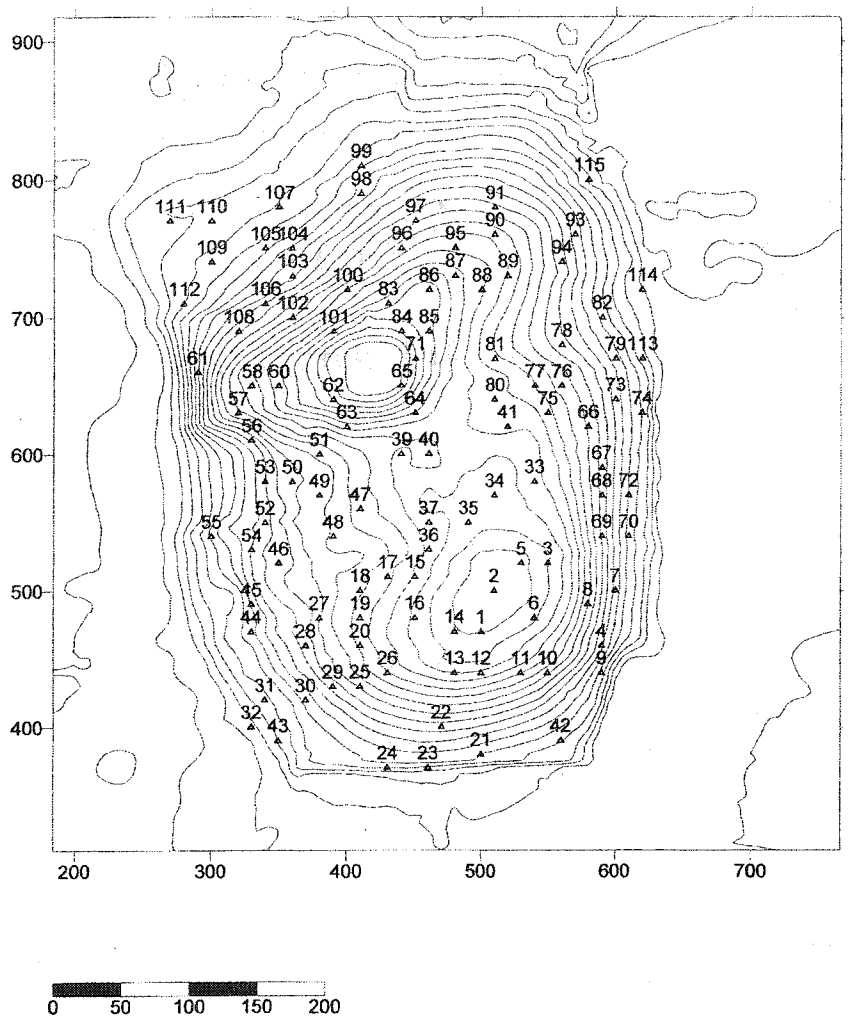


Fig.6.2. Surface Collection Points

The pottery was analyzed by distinct ware categories. These were initially based on knowledge of prehistoric sites within southeast Turkey and North Mesopotamia. In fact, this recording system formed the basis of the medium level analysis in the Domuztepe ceramic processing system. It was clear, however, that our understanding of

the ceramics at the time of collection, before any excavation had taken place, was incomplete. All of the diagnostic sherds from the surface collection were therefore retained and completely reanalyzed in 2000 in the light of the experience gained during the first phase of excavations. Although the general trends remained very similar, the 2000 analysis is more reliable and can be better understood in terms of the excavated sequence now known from the site. The analysis from 2000 is therefore used here.

Late occupation is clearly indicated not only by characteristically late pottery, mainly late Roman and Byzantine/Early Islamic, but particularly by fragments of roof tiles and bricks. The area of late occupation is largely restricted to the southwest and in a band running NE across the center of the site.

Although this is only a portion of the total site, there is also a substantial amount of masonry on the surface, some of it ploughed up since the 1970's and including a column section. This settlement may have been of some substance during the 1st millennium AD and was possibly associated with the bridge, which crossed the stream to the west of the site until it was largely destroyed by projects of the water department in the 1970's. Equally the cemetery of around 1000 AD excavated in Operation I at Domuztepe probably relates to this phase of occupation, although it is worth noting that this material showed up only minimally in the surface collections. The 1st millennium AD settlement is not the primary focus of the project and it is therefore particularly important here that the later material does not significantly restrict access to the prehistoric deposits and even where it is present does not entirely mask the prehistoric material on the surface of the site.

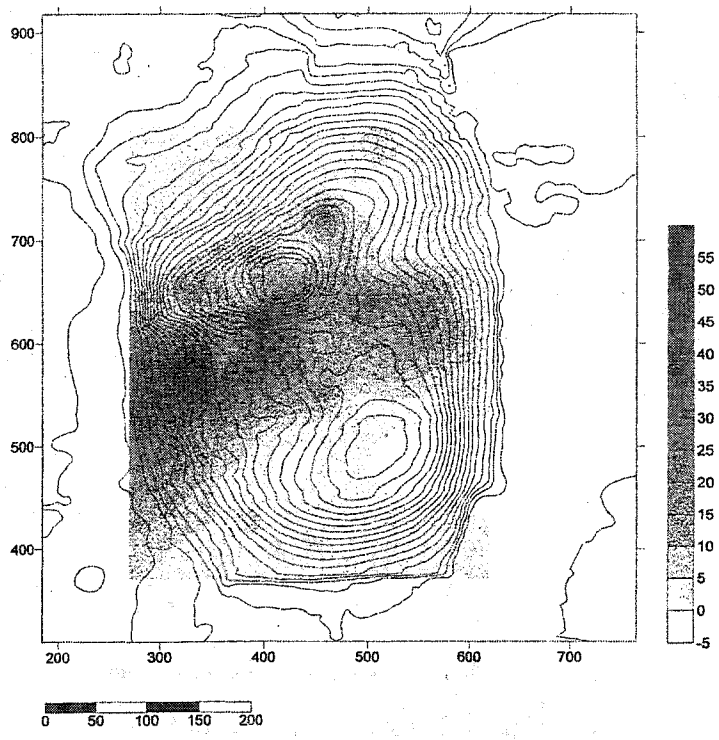


Fig.6.3 Distribution of Late Pottery (Roman) on the Surface

The present shape of the site is different from the shape of the prehistoric mound complex. Certainly erosion has blurred its outline but it seems probable that the rather indistinct division into north and south was more marked. The highest part of the mound is in the North and is covered on its summit by a late rectangular construction (possibly an Islamic fort). Even on this highest part of the site, prehistoric pottery here is still abundant. The north mound was probably always the highest point of the site. There is a slight dip in the center of the site before it rises again to the southern mound, the location of Operation I. Today, this dip is only in the order of 1m. at most, but it contains high percentages of late material. Based on our limited knowledge of the depth of the late

deposits on the site, the depth of this late phase may be about 1m. This suggests that the saddle between the north and south mounds was much more marked in prehistory. It remains unclear whether these higher portions of the site reflect more substantial or sustained building activity or whether the origins of the site lie in two distinct occupations.

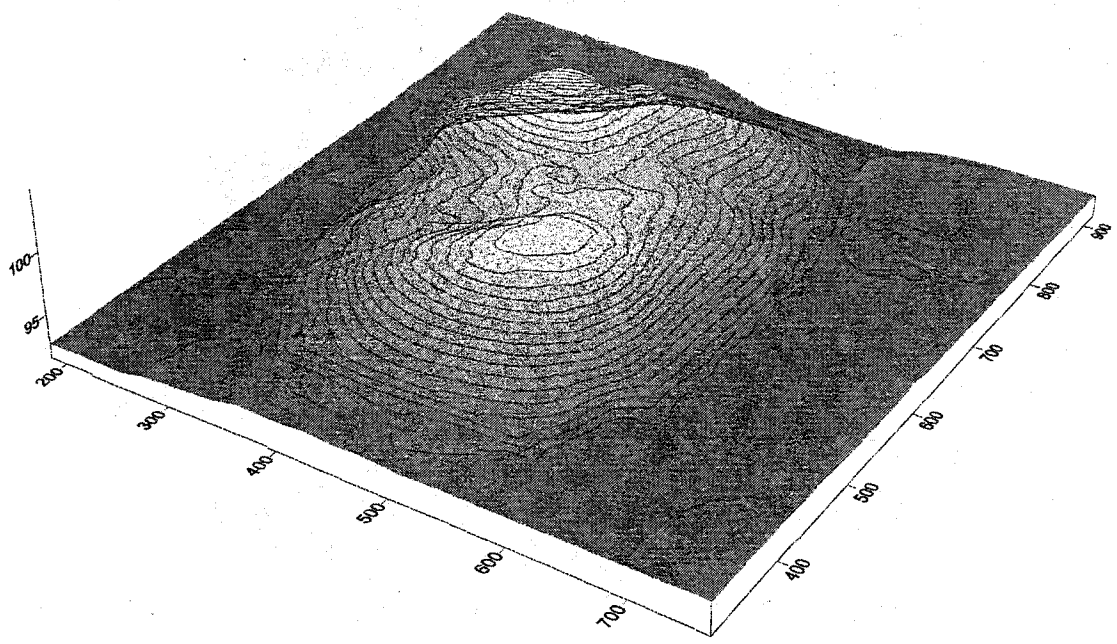


Fig.6.4.a Topography of Domuztepe, view from SE

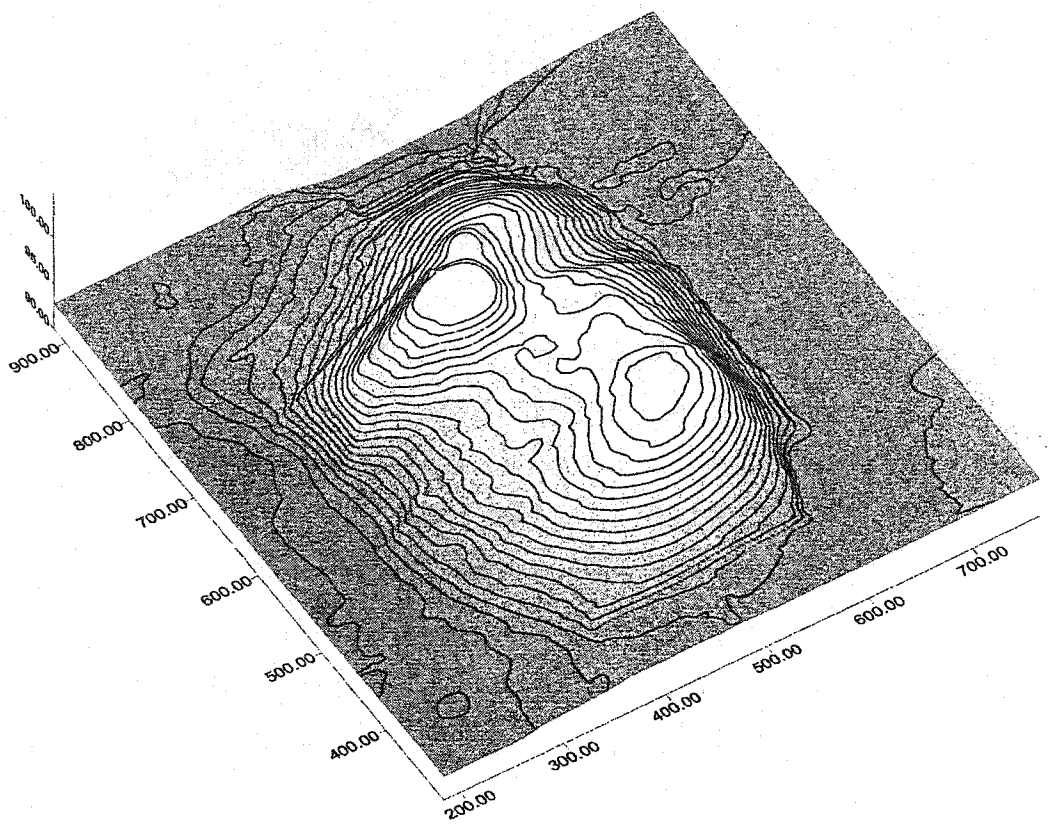


Fig.6.4.b. Topography of Domuztepe, view from SW

Prehistoric pottery is found across the whole surface of the site in large quantities. The locations where its density drops is probably entirely attributable to late overlying occupation rather than an absence of prehistoric occupation. It is assumed here that, in general, the pottery on the surface has been ploughed put of the immediately underlying deposits and broadly represents the latest phase of occupation at any one location. Although this is undoubtedly incorrect in some instances where, for example, there is ancient or modern pitting, the assumption that sherds found on the surface reflect the latest occupation is confirmed for the most part by excavation.

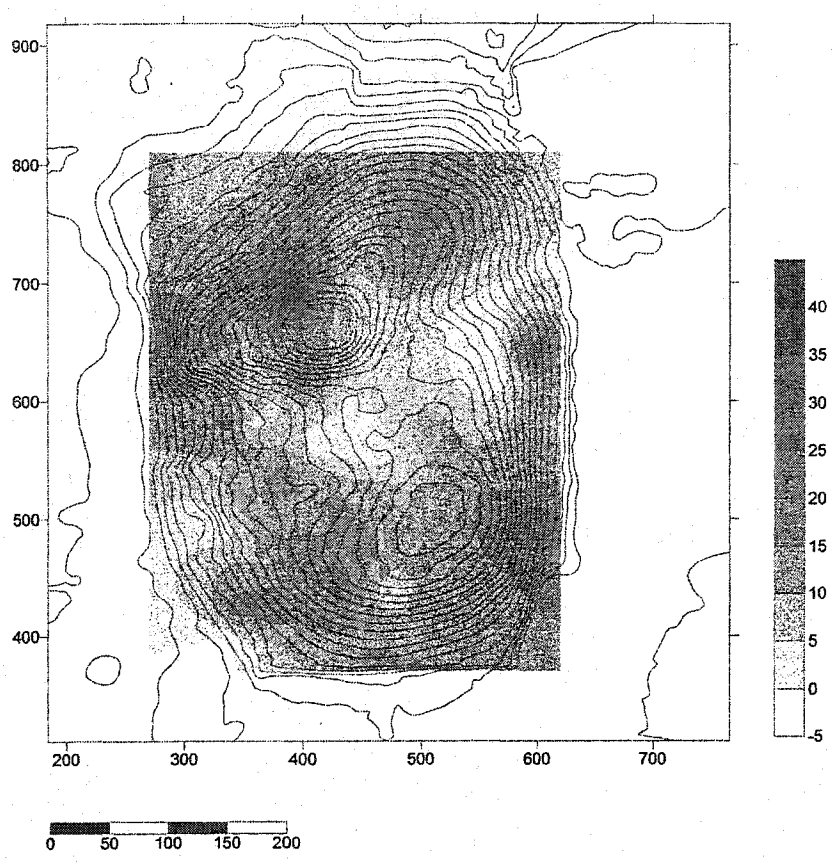


Fig.6.5. Distribution of Halaf Ceramics on the Surface

Across all of the site the latest pottery fits into the general time period of the later Halaf. Taking the area as 20ha, conventional estimates of 100-150 people/ha suggest that there may have been a peak population in the order of 2000-3000 (see Chapter 7, the discussion in conjunction with the site catchment of the site). This sort of estimate is very approximate and there is already some indication that there are more complex spatial patterns underlying the general distribution.

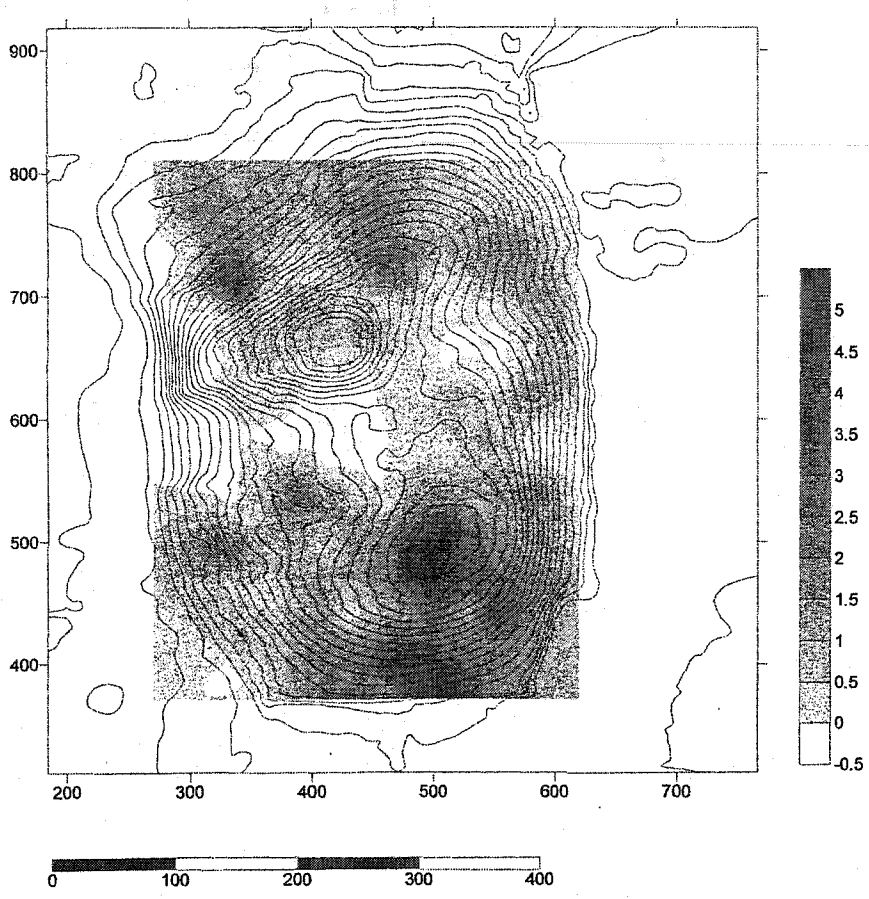


Fig.6.6. Distribution of Transitional Halaf-Ubaid (Bichrome, Painted Orange) Ceramics on the Surface

One specific example is an area in the southeastern portion of the site, particularly to the north of Operation II. This area is distinctive in any case in having rather larger sherds than other areas and having much more bone remaining on the surface. This suggests an area where more material is being brought to the surface rather than simply circulating and being eroded within the ploughsoil. Of particular note is that there is much higher density of thick burnished sherds here than elsewhere. If, as suggested by pottery analyses, this type is particularly characteristic of the A1 and A2 ceramic phases, this part of the mound was not occupied intensively during the A3 phase. In fact, given

the presence of phase A1 ceramics close to the level of the surrounding plain in Operation II, it is possible that this area of the mound is a relatively short-lived expansion of the site.

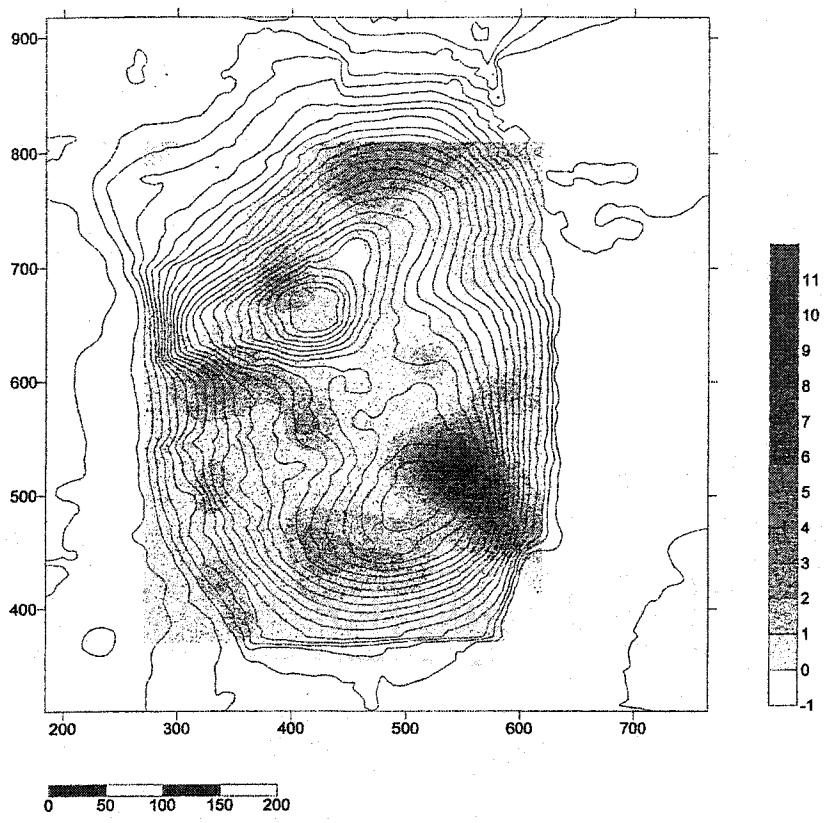


Fig.6.7. Distribution of Thick Burnished on the Surface

Further analyses support the indications of a much less stable settlement size for the site. There are three surface distributions that hint at the extra detail. As mentioned in the previous paragraph, the distribution of thick burnished sherds should show the area where phases A1 or A2 are at the surface, i.e. where abandonment was prior to the A3 phase. The ratio of vegetable to grit coarse pottery is also interesting. In summary, there is much more grit tempered coarse pottery than vegetable tempered pottery in the A3

phase but about equal quantities in phases A1 and A2. Vegetable tempered pottery is softer and will probably not survive all that well in the plough zone but basically where there is a high percentage of vegetable-tempered pottery, there may be little phase A3 occupation on that part of the site. There are high percentages of vegetable tempered pottery both in the southeastern and the northern sectors of the site and around the edges generally. A similar pattern might be seen in the ratio of red burnished pottery to black burnished. A higher ratio of red to black burnished might be expected in Phase A3.

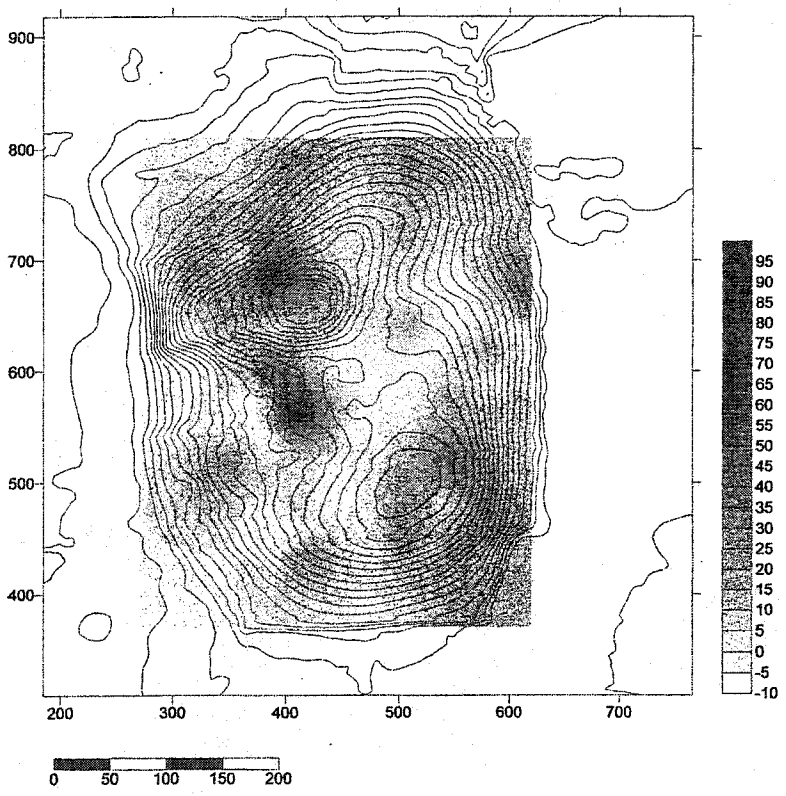


Fig.6.8. Distribution of Vegetable Tempered to All Coarse

The full sequence of the development of the site is and may well remain unclear. The earliest phases of occupation at the site are very uncertain as material from these phases is certainly masked by later prehistoric material. However, individual sherds that

could be broadly categorized as early Halaf occur in both the north and south of the site and it may be that something close to the full size had been already reached early in the 6th millennium BC. Certainly the depth of deposits across most of the site suggests that its current size was maintained for a considerable time. The very small quantities of ceramic Neolithic pottery are more common in the south of the site, which might suggest an earlier but rather substantial occupation of this area.

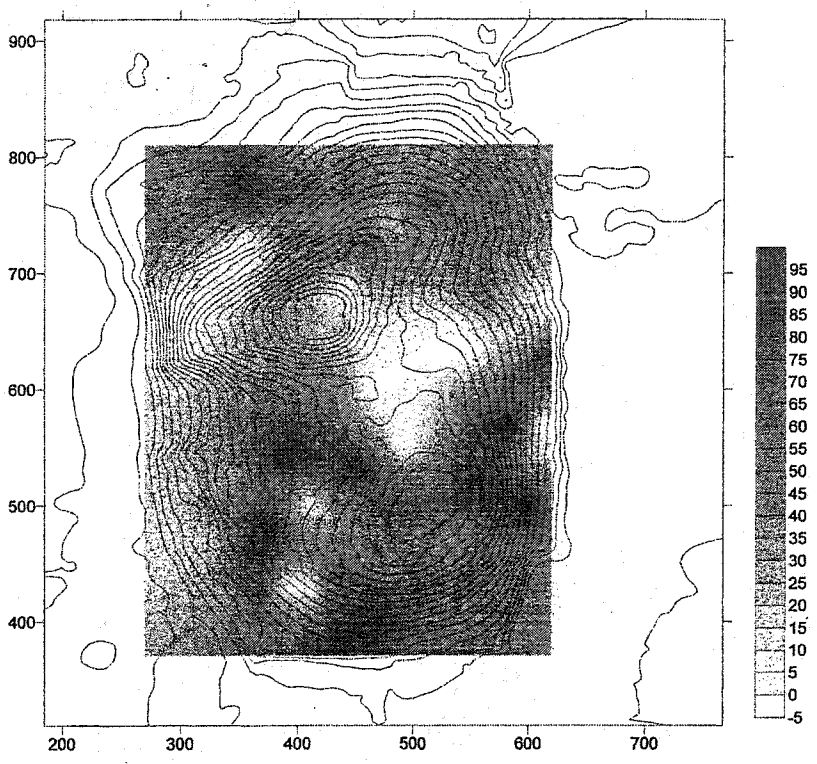


Fig.6.9 Distribution of Red burnished to Red and Black Burnished Ceramics

Although plotting the major ceramic types individually does give a fairly accurate idea of occupation during broad phases, it is less helpful in understanding the finer dynamics of settlement and does not easily allow us to relate it to the later stratigraphy from the site. This is because the distinctions between Phases A1-A3 are subtle. In only a

few cases of rather rare pottery is the development visible as a simple presence or absence of a particular type. Generally, it changes in proportion between different types and only becomes clear when the whole range of ceramics is considered together. In other words, it is something, which may be poorly understood by a univariate or bivariate analysis rather than a more complex multivariate analysis.

In an attempt to evaluate these last phases of occupation on various parts of the mound with more precision, the surface collection database was subjected to discriminant analysis. Discriminant analysis allows a set of cases to be assigned a specific probability of belonging to previously established groups. In this case, the excavated pottery data from the medium level of analysis was used to define the characteristic compositions of phases A1 through A3. If we make the assumption that, in general, the pottery in each collection unit comes from a broadly contemporary set of ploughed-out contexts, we can use discriminant analysis to predict the probability of each surface collection unit belonging to each medium level pottery phase. Although this assumption of broad contemporaneity is debatable, its credibility can be evaluated by the results of the discriminant analysis. Where a collection unit has sherds drawn from a wide range of different time periods, this should tend to be shown as a fairly equal range of probabilities for each medium level phase. A high probability of belonging to one specific phase should indicate that the pottery is indeed relatively unmixed. In the actual results, this was indeed the case.

On the basis of this analysis, Figure 6.10 gives a representation of phase A1 present on the visible surface of the mound with the darker colors representing an

increasingly high probability that the surface collection originates in a phase A1 assemblage. Since the last phase of occupation on the site of Domuztepe was A3, the presence of an A1 assemblage on the surface of the mound would mean that the dark areas shown on the figure were probably already abandoned by the end of phase A1. In general, this clarifies and confirms the indication suggested above. For example, the slope on the east of Operation 1 towards operation 2 seems to have been abandoned early. The northern edge of the site might also have seen an early abandonment as with the southern sector of Operation 1. The two anomalies to the west of the summit are also remarkable in this respect.

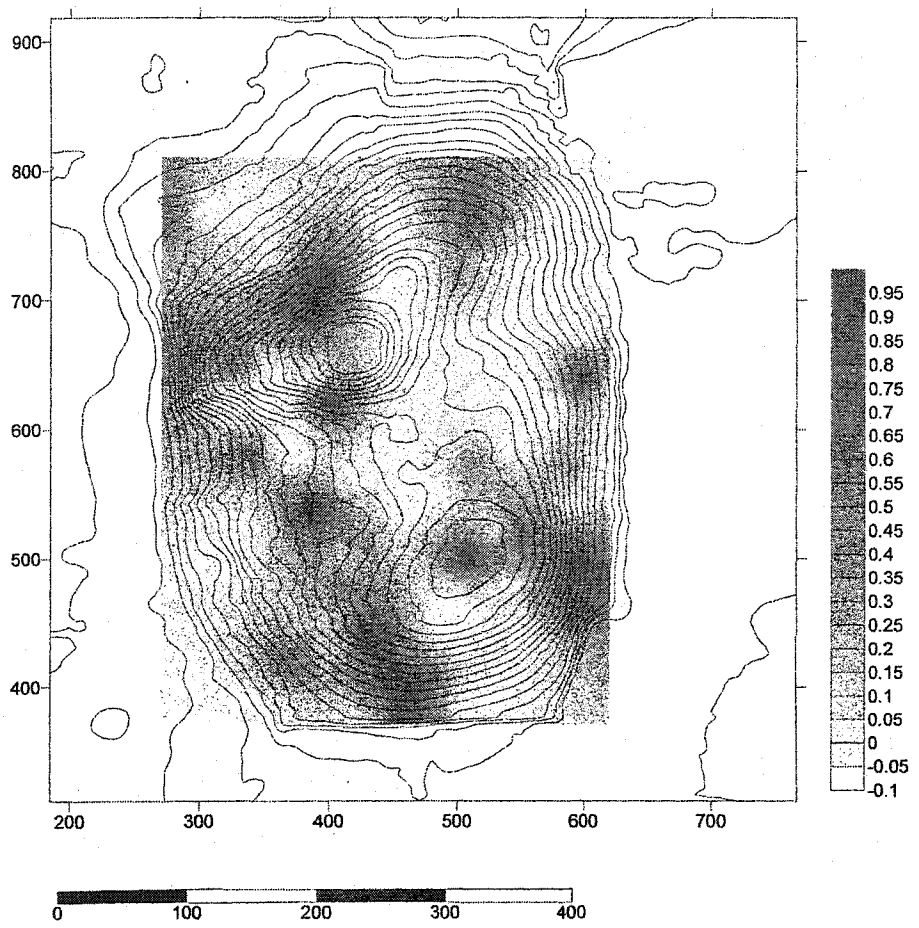


Fig.6.10 Probability of Domuztepe Phase A1 on the Surface

The combination of these approaches to analysis may support the idea of a contracting settlement by phase A3, perhaps a decline to a settled area in the order of 10-12 ha in extent. By the final occupational phase A3, a substantial amount of the site may have been abandoned. In Operation I, Phase A3 covers a period involving 2-3 building levels (perhaps about 50-100 years). This confirms that the desertion of the site did not happen overnight but in the course of a few generations. Considering that there was at

least half a millennium of prior occupation, the occupants of the site in its final phase must have been acutely aware of the abandonment process.

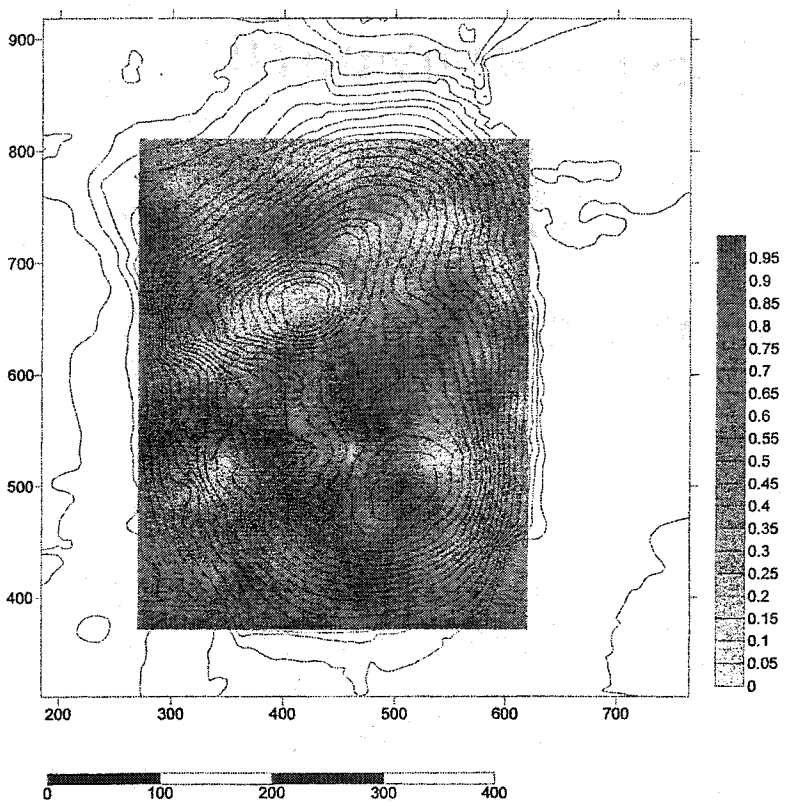


Fig. 6.11 Probability of Domuztepe Phase A2 Occupation on the Surface

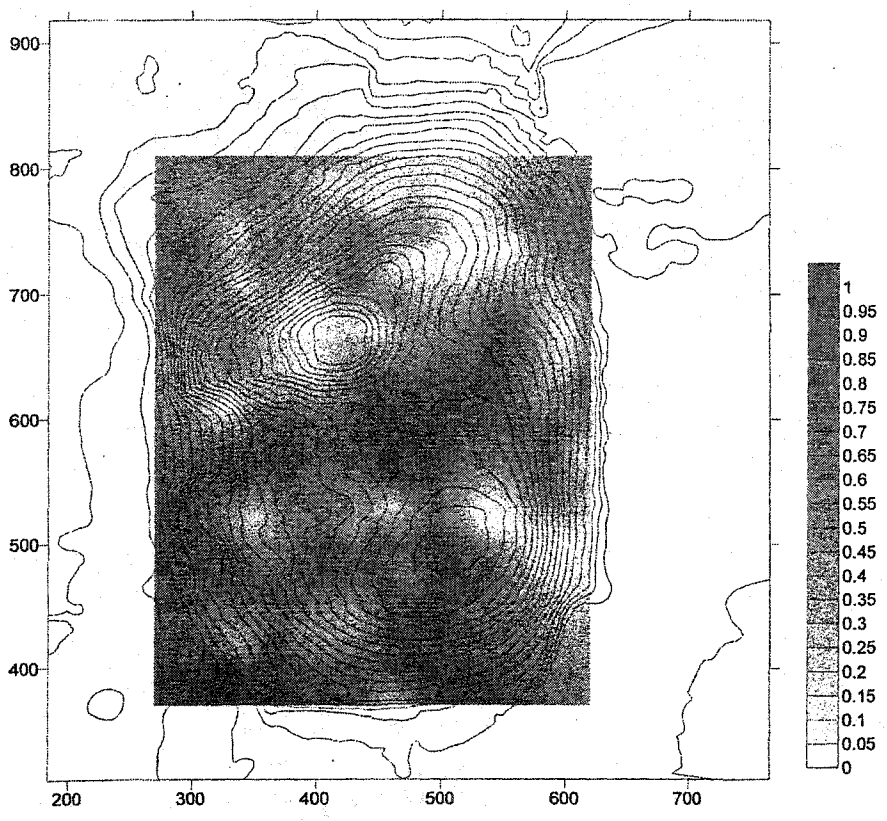


Fig.6.12 Probability of Domuztepe Phase A3 on the Surface

In sum, Domuztepe's surface collection reflects a very similar pattern to that of the North and Central Basins. Certain areas of the site of Domuztepe were occupied in shorter durations and were abandoned before the final abandonment of the site. In this regard, the final abandonment may have been an ongoing process of some duration structured by the traditions surrounding residential mobility exercised throughout the 6th millennium BC.

As I will discuss further in Chapters 7 and 8, processes of abandonment, occupation and re-occupation of sites may have been structured by traditions surrounding death and other cycles of life. Furthermore, movement and re-occupation of certain

locations may have carried messages about the bases of social life and relations that people were in. The so-called Death Pit, recently excavated on top of the southern mound of Domuztepe gives further detail of social factors influencing and structuring residential mobility and perhaps the landscape at large during the 6th millennium BC (Carter and Campbell 1997, Campbell and Carter 1998).

Beyond a simple understanding nature of settlement patterns and movement on the landscape, the synchronic analysis with the basin systems has further implications. Although Domuztepe's surface collection only gives specific information on the complexities of the final phase, we can infer this settlement and its social topography was complex over a much longer period. The presence of the two major mounded areas as well as the scanty distribution of the earliest pottery supports this conclusion. We can begin to see the site as potentially an agglomeration of originally demarcated deposits from a mosaic of settlement.

Elsewhere in the Kahramanmaraş Region, it can be suggested that the primary social context of Halaf Period communities was an organization at the level of extended households. As a norm, it is possible that the settlement size might be typically in the order of 1-2 ha, representing a grouping of households forming a sedentary community. If 1-2 ha is taken as an approximation of the size of an average primary social unit during the Halaf Period, it is conceivable that Domuztepe, with its probable complex settlement pattern of demarcated areas, may be occupied by several of such social units tied to this locale for various reasons yet still preserving their independent economic and social identity.

Chapter 7

Modes of Representation in Settlement Patterns

This discussion is in part a development of the preliminary discussion of the regional settlement in a long-term perspective presented in Chapter 5 from the particular perspective provided by the discussion of the intra-site examination of Domuztepe in Chapter 6. In this section I develop a model to interpret the settlement continuity, congruity and abandonment in various scales of analysis so that the proposed theory in Chapter 3 can be explored in the following chapters.

Previous Approaches to the Settlement Patterning and the Social Structure of the Halaf Settlement

Various models have been proposed as a framework to understand the social structure in the 6th mill. BC, based on the distribution and size of settlements. A conventional site differentiation based on site size had been proposed for Halaf Period sites (Akkermans 1990), although it should be remembered that the majority of sites are small to very small villages covering average of 1-2 ha areas. This differentiation based on site size was considered in three categories:

1) very small hamlets with a surface of 1 ha

2) small and larger villages with surfaces between 1-6 ha.

3) large villages with a surface of over 6 ha.

The mobile and ephemeral nature of occupations however makes it difficult to suggest a complex political organization behind this differentiation. As suggested, usually the shifting pattern is interpreted to be closely associated with shifting

agriculture and strong nomadic pastoralists component. The agricultural practices may have remained within non-intensive regimes since the animal products were a major component in the economic and social relations of the time. In this view then numerous sites could have been repeatedly visited for a short time on a seasonal basis. This can be considered to account for the fluctuating, short-term nature of Halaf occupations observed.

Recognizing the difficulty associated with revealing political complexity based on site size relations, for the North Jezira, Campbell (1990) classified sites based on the variety of artifactual assemblage, site size and occupational history. According to Campbell, such a differentiation may have existed earlier but is most visible in the Halaf II (Late Halaf) period. He discusses in particular the contrast between the long-lived tell sites, which have been the traditional subject of excavation, and the relatively short lived sites known through excavations and surveys. For example, sites such as Kharabeh Shattani, Khirbet esh-Shenef, Umm Qseir and Shams ed-Din may only have been occupied for 150 years each and contrast strongly with sites such as Arpachiyah and Yarım Tepe 2 that clearly have dominated community formation for prolonged periods irrespective of their sizes.

Campbell (1992) suggests that, in contrast to the long-lived sites, short-lived sites do not have the full range of Halaf material culture. For example, at Kharabeh Shattani, there are no figurines and no seals. There have been also a suggestion that polychrome and bichrome pottery of the Late Halaf Period were high status items and their use may have been deliberately restricted to the long-lived sites (Campbell 1992).

Further differentiation is suggested to account for short-term sites with some important assemblages. Some of the smaller sites such as Umm Qseir may have been established to exploit specific resources (Campbell 1992). The presence of seals at this short-term site may also reflect another level of differentiation when compared to settlements such as Kharabeh Shattani, which lacks seals. Accordingly site size may be considered to complement this already existing differentiation, rather than framing it.

In a comparative view, we understand that both small and large sites can be a focus of repeated occupation and equal levels of artifactual complexity. All long-lived sites in Kahramanmaraş (e.g. 125, 67, 97) have different sizes spanning from very small at 125 to the largest known at Domuztepe (97). Complexities of the landscape and community formation do not simply appear to be a function of modern site size but a combination of factors for the prehistoric settlement patterns. Combined analysis of size, long-term occupation, relative presence of variety of artifacts may indicate that there may have been a type of emergent complexity at repeatedly targeted long-term occupations. However, the nature of this complexity may be diminished if considered in terms of the cultural evolutionary models.

As far as the problem of estimating site sizes are concerned, in a mobile environment we may anticipate that what appears as a long history of occupation at a site may be a result of clustering of shorter-lived sites as in the case of Domuztepe (Chapter 6). Community clusters can form in restricted space or in a relatively more dispersed space. In this regard, the differences in the tightness of occupation (spatial congruity) or long history of occupation (temporal continuity) in certain nodes can

construct a more subtle differentiation to account for a community representation on the landscape than the site size itself to understand differentiation in social and political organization of 6th mill. BC. Therefore, sequence and range of spatial congruity is an important aspect to reconsider in reconstruction of settlement history and social significance of residence.

The Contemporaneity Problem

Before coming to an interpretation, a further review of the practical problems is in order. For a settlement phase to be archaeologically visible on a tell surface, there must have existed a certain number of houses for a length of time in order to build up a detectable deposit. Continuous occupation with very low frequency of abandonment episodes can build up substantial deposits that can be archaeologically easily detected. On the other hand, very frequent abandonment and reoccupation episodes can similarly build up a substantial deposit, which may archaeologically appear continuous within a ceramic phase.

The suspected abandonment can take place either as a dramatic episode or as a slower desertion process, which similarly would be difficult to distinguish archaeologically. This problem has been a perplexing one for regional analysis. Plog (1973) discussed in under the concept of the "synchronistic paradigm", Schacht (1984) articulated it as " the contemporaneity problem", and Dewar (1991) later developed a method of calculation to more realistically inquire the number of settlements in a given chronological phase. Essentially, these discussions attempt to bring a solution to the

methodological problem in which all components of a phase are usually assumed to be contemporary even when there are grounds for suspecting that this is not true (Schacht 1984). It was argued that without understanding the frequency of population relocation and length of occupational phases, counting of number of sites with any kind of fossil type artifact would be a mere exercise (Schacht 1984, Dewar 1991). Dewar and McBride (1992) developed a method of inquiry to remedy this problem whereby they reconfigured the three analytical characteristics of occupational events, i.e. demography, site function and occupation length, as isolated dimensions which may be complemented with analytical dimensions of **occupation frequency, temporal continuity** and **spatial congruence**.

The continuum of temporal continuity is measured as the number of consecutive years a given place is reoccupied by a seasonally mobile group, or the number of years that a year-round occupation will be maintained in the same place. Different site types in the same settlement system will probably not have occupation sequences of identical temporal continuity. The spatial congruence of sites in an area is the measure of the average spatial distance separating occupations; high congruence is the case where several occupations repeatedly use the same location, whereas low congruence is where several occupations are spread out over a landscape, each far from earlier occupations. Areas with high congruence are most archaeologically visible, for instance in the case of tells, where occupations build on top of the remains of previous occupations, generating a thick deposit. Areas with low congruence have more sites,

and these sites may have shallow deposits representing limited continuity of occupations.

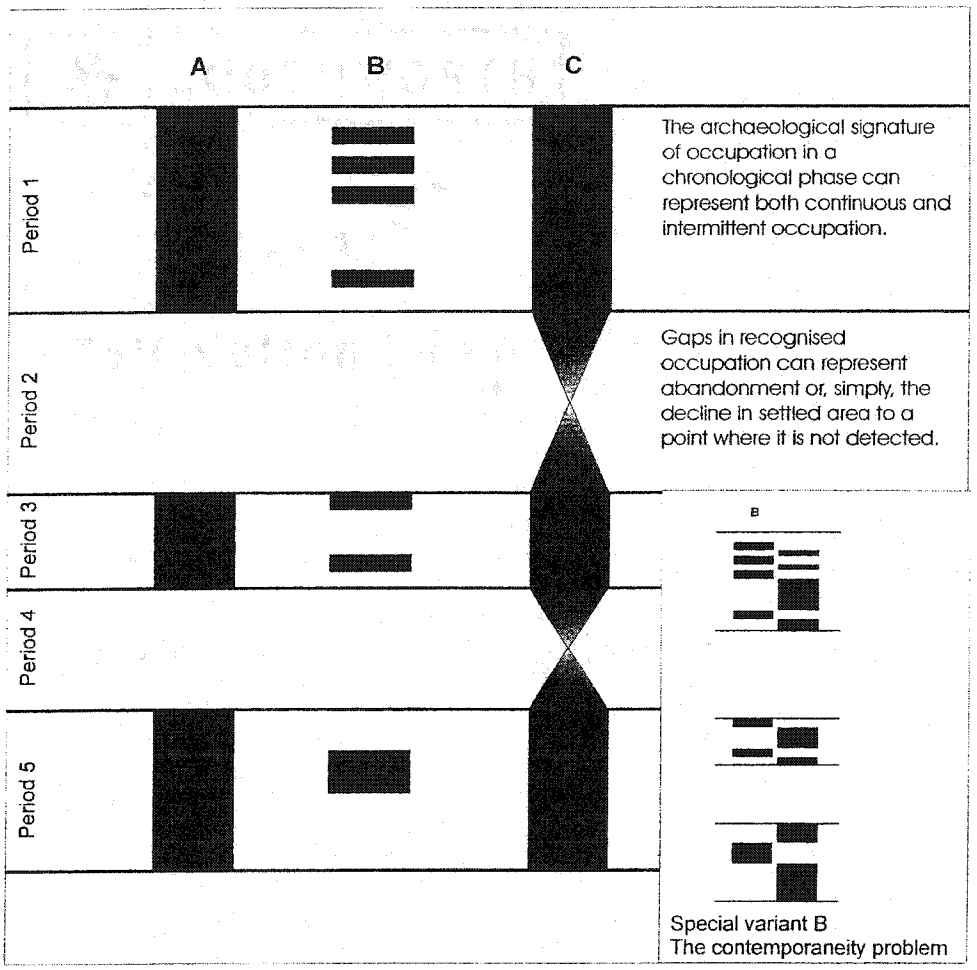


Fig.7.1. The Contemporaneity Problem

Modeling Temporal Continuity and Spatial Congruity in Kahramanmaraş

In previous studies of the Halaf Period landscapes, frequent movement and mobility has been observed to be a major obstruction to healthy analysis. Wilkinson demonstrated that such a movement might be followed through a comparison of ceramic inventories of geographically close sites (Wilkinson 1990a). This can be possible if the internal relationships between ceramic types are understood in detail. Domuztepe's excavated phases A1-A2-A3 give such detail for the Late Halaf Period and have been discussed in Chapter 4. Based on this analysis, I discussed the intra-site temporal continuity and spatial congruence for the site of Domuztepe in Chapter 7. In this section, I employ the same analysis to the sites of the North and Central basin occupations based on the surface ceramic inventories of the sites as discussed in Chapter 4 and demonstrated in Appendix A and B. This approach is based on the criteria that closely associated sites within each basin system, such as the sites of the Central Basin KM 70, KM 67, KM 69, have complementary types when considered together present a continuous occupation of a loosely integrated community zone.

As will be recalled, out of the 92 sites reported to have prehistoric ceramic or lithic inventories in the survey region, only the sites KM 8, 70, 67, 97, 125, 69, 96 gave large ceramic assemblages to base the regional chronological framework upon. Sites 8 and 70 have high concentrations of mid to late 7th millennium assemblages on the surface giving an indication that they were abandoned by the late 7th millennium BC. And were perhaps only very temporarily occupied in any of the later phases.

Sites with a good sample of Halaf assemblages are KM 67, 97 (Domuztepe), 125 and 69 although there is a number of sites with low 6th millennium BC artifact densities. Out of these sites, sites 67, 97 and 125 represent repeated occupation during the 6th millennium BC (representation of late 7th millennium ceramics collected together with Halaf ceramics). Halaf-Ubaid transitional assemblages from the sites 96 and 67 have formed the basis of Post-Domuztepe developments in the region. The assemblages of these sites give a range of ceramics with chronological correspondences to Halaf-Ubaid Transitional and full Ubaid periods in Mesopotamia. These phases appear to be the last phases of occupation on both sites.

The models for temporal continuity are based on the core evidence from sites 8-9-70-67-69-68 in the Central basin; sites 125-124 in the Northern Basin, and sites 97-96 in the South-eastern Basin. Other sites have been included in the model based on presence of artifacts recorded either in the original survey or later during the re-examination. Often this evidence may not be considered enough to date the settlement history on a site in isolation. However, in the model proposed these sites fitted into an overall picture of history of mobility.

Although Chapter 5 discussed the occupational history in three basin systems in some detail, I will reconsider the temporal relations between sites KM 8-70-67-68-69 in the Central Basin as an example of the method to date residential mobility.

Site 67, in the Central Basin, is a high mound with potentially successive phases of occupation in between the late 7th millennium and Post Domuztepe Periods. The assemblage of late 7th millennium burnished ceramics at this site give the impression

that they belong to a later phase than the assemblages of mid to late 7th millennium BC sites of KM 8 and KM 70 (although some overlapping with KM 70 is plausible). Also present are orange painted related ceramics similar in nature to the Domuztepe orange painted ceramics except with more resemblances toward Ubaid shapes at 67. This places the earliest occupation to the late 7th mill BC and last occupation on the surface of the mound to an immediately Post Domuztepe date. In between, the site was probably repeatedly targeted although the continuity cannot be demonstrated.

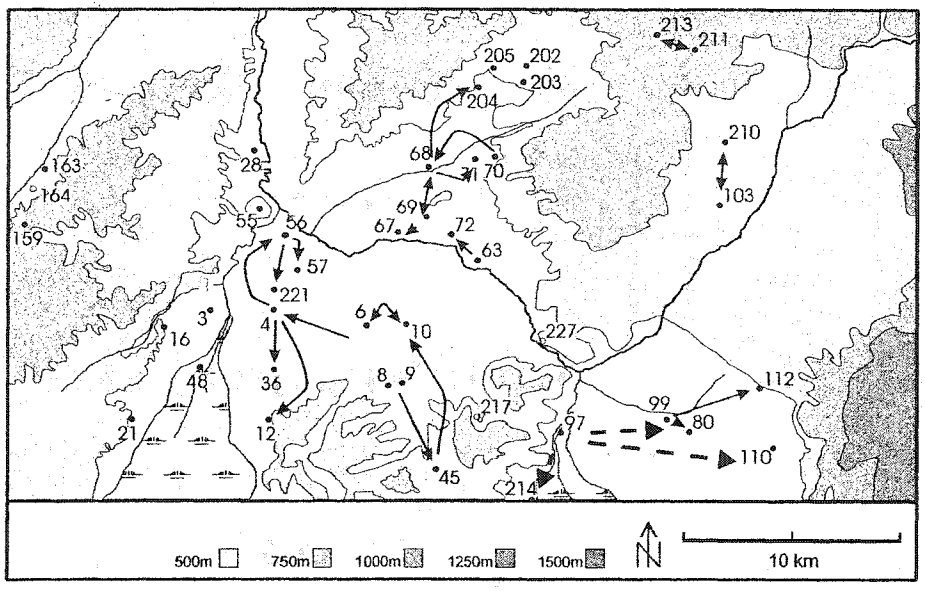
Approximately 2 km. north-east of KM 67, the site 69 also has some late 7th millennium burnished ceramics. The collections show very rare painted orange and bichrome existence in an assemblage of thick burnished, and classic Halaf sherds. This evidence indicates that the terminal Halaf occupation on the surface must have occurred sometime around Domuztepe A1 and A2 phases while the earliest occupation is late 7th contemporary with KM 67. Absence of bichromes may indicate a possible abandonment during Domuztepe A3. This appears to have been followed by reoccupation in later Ubaid as the presence of classic Ubaid and other broadly Ubaid sherds indicate. This means that KM 69 was still occupied/used after the abandonment at 67. Site 68 also gives evidence of broadly Ubaid influenced sherds and some pieces with similarities to the 67 bichromes. As site 67 was being abandoned, various other locations in the basin were being occupied (e.g. KM 68).

A similar pattern can be suggested during the abandonment of Domuztepe in the Southeastern Basin. As the analysis of the surface collection suggested, Domuztepe was in a process of gradual abandonment in Late Halaf Period. Site 96 approximately 5 km

to the south of Domuztepe, in the south-eastern basin has both bichrome ceramics similar to 67 and belonging to an immediately post Domuztepe phase. Site 96 also has classic high-fired Ubaid sherds that are poorly represented in Late Halaf contexts. Other sites in the vicinity of Domuztepe gave evidence of both Halaf Period mobility (84, 45, 92) and existence of occupation after the abandonment of Domuztepe (96, 87, 99, 110, 88, 91).

Based on this interpretation of the evidence, the following figures map out diachronic and synchronic perspective on the temporal continuity in each community zone.

A Model of Temporal Continuity in the Central Basin



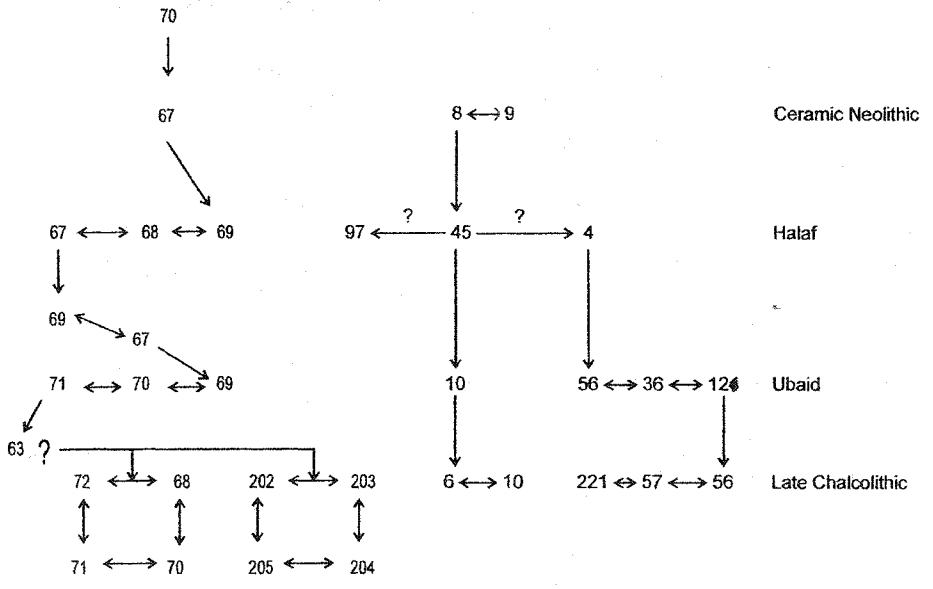
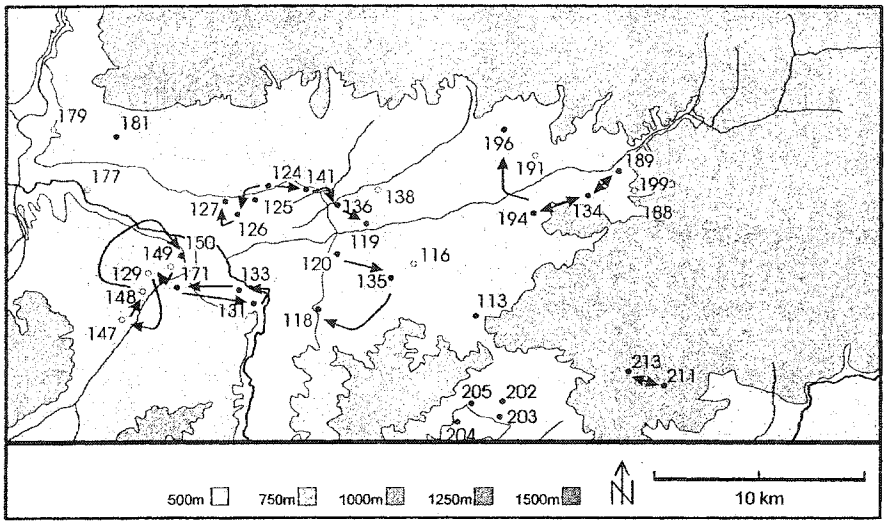


Fig.7.2. Residential Mobility and Occupational History in the Central Basin

A Model of Temporal Continuity in The Northern Basin



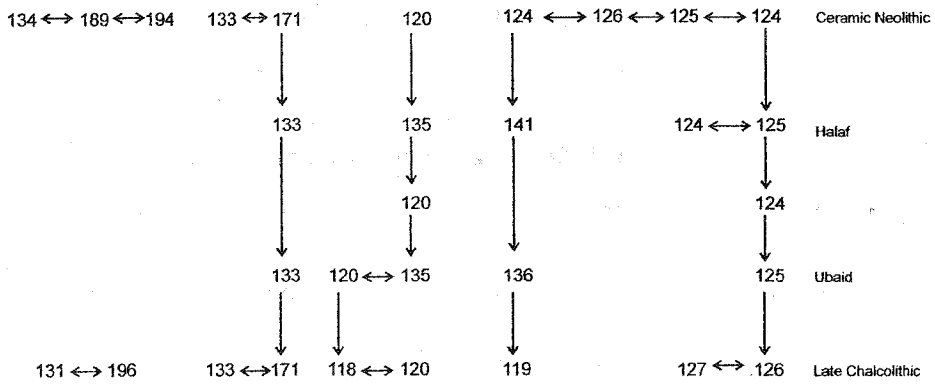
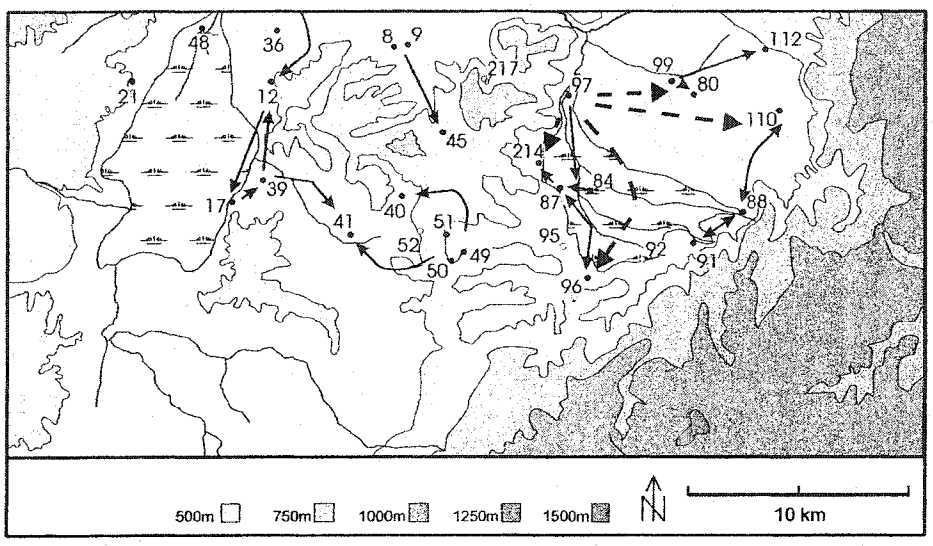


Fig.7.3. Residential Mobility and Occupational History in the Northern Basin

A Model of Temporal Continuity in The South-Eastern Basin



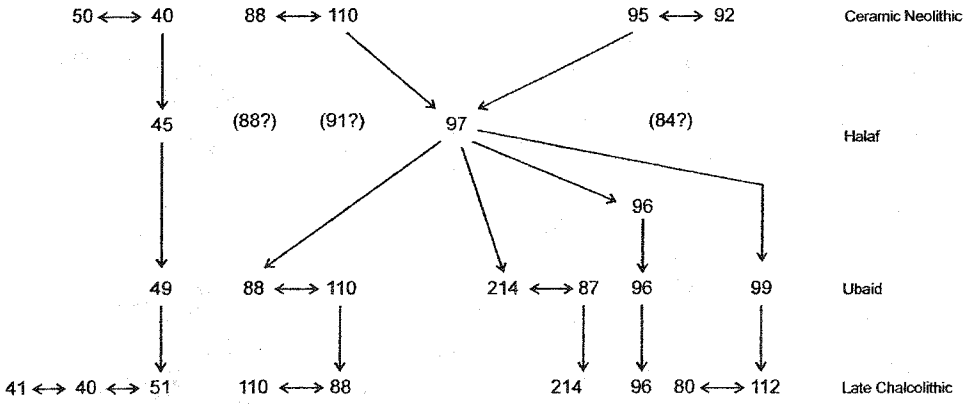


Fig.7.4. Residential Mobility and Occupational History in the South Eastern Basin

A Model for Spatial Congruity in the Kahramanmaraş Region

There are three sites with representation of temporal continuity throughout the 6th millennium BC, each located in a different basin system. These sites are KM 125 in the Northern Basin, KM 67 in the Central Basin and KM 97 (Domuztepe) in the Southeastern Basin. Within their occupation zones, they reflect various scales of spatial congruity. KM 125 is the smallest and shallowest in deposit and associated with a number of dispersed small sites similar in nature. KM 67 is moderate in size and has the thickest deposit of accumulation. It is associated with small sites such as 69 again dispersed in a community zone of continuous occupation. KM 97 is composed of a number of topographically distinct occupations, agglomerated in to the circumscribed boundaries of the modern visible deposit, which gives an impression of one large site.

Each community examined in the later Neolithic landscape context of Kahramanmaraş consists of a continuously maintained community zone, albeit varying in spatial congruity and temporal continuity of occupations. As a general rule, there is always a repeatedly targeted location associated with shorter-lived sites. For methodological purposes, for a mobile society such as the Halaf Period groups in Kahramanmaraş, the settlement pattern can be framed around such repeatedly targeted occupations. Such repeated occupation indicates fixation of a geographical location within a certain time period as a returning point whether that location was occupied permanently or seasonally.

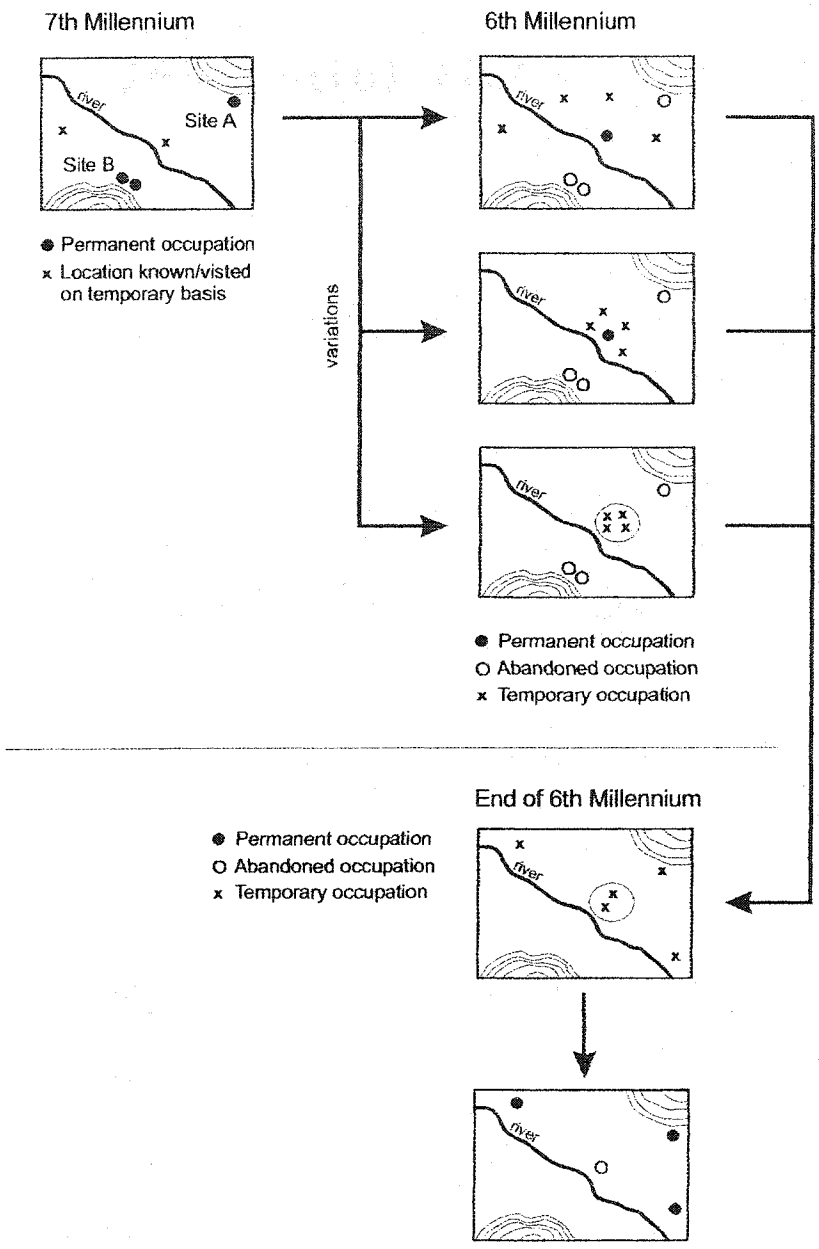


Fig.7.5 A Model for Spatial Congruity in a Diachronic Perspective

What links these sites? Can the long-lived sites be considered as a center of some hierarchical network? If so, what are the structuring principles of this network? In Kahramanmaraş, the exact duration and frequency of occupation cannot be confidently established, however based on the ceramic collections examined, the short-lived sites such as 69 may have been occupied continuously for a few generations before abandonment. Equally, while the sites may have been occupied by a group, other individuals of the community may have seasonally moved to pastures as the subsistence background of the sites may suggest (discussed later in this chapter).

Sites with a long-term focus (97, 67, 125) can range anywhere between 1ha to 20ha. They do not necessarily reveal a continuous occupation but rather a repeated use or knowledge of the location within known ceramic phases. Size may be considered significant, at least as an indicator of social complexity. However, the surface collection of Domuztepe reveals unexpected results (Chapter 6). Firstly, gradual dispersal of populations occupying various parts of the site indicates that these moving segments were rather decentralized in their decisions to move or stay. KM 97 (Domuztepe) was occupied for at least 500 years during the early 6^{th} millennium BC. This occupation created approximately 12m of deposit on the base of a 20ha size visible above the modern plain level. Reconnaissance around the site indicated that at least 2-3 m of deposit can be added to this figure. The analysis of surface collection of Domuztepe presented in Chapter 6 indicated that this size and thickness may have been created by

frequently moving segments (potentially in the size of a site such as 69 or as large as 67) within and out of the area of occupation.

The ceramic inventory of KM 69 perhaps reflects a typical 6th millennium picture. There are sherds from the late 7th millennium, sherds from the Halaf and Ubaid periods distributed on the surface of a small and shallow deposit. The shallowness of deposit suggests that these occupations may not have been too substantial, reflecting a high degree of frequency in mobility potentially influenced by the practices of mixed subsistence, i.e. shifting rain-fed agriculture and pastoral nomadism as will be discussed later in the chapter.

The gradual and slow nature of the abandonment processes during the second transition in Kahramanmaraş (Chapter 5) also supports an argument that mobility may have been an embedded and widely accepted practice of life and gives support for the suggested models of shifting occupation in each basin. Mobility under loosely integrated social systems can be influenced not only by economic factors but can be a social process embedded in traditions structured by the beliefs about the order of things.

Economic Bases of Spatial Congruity and Temporal Continuity

High spatial congruence in decentralized societies can be influenced by environmental stress, which can be caused by either climatic change, change in soil conditions, variations in resource abundance or subsistence techniques. This section explores the climatic context and subsistence strategies during the 6th millennium BC in Kahramanmaraş.

The Climatic Context

This section is designed to summarize the recent results of palaeoclimatic studies in order to understand the climatic context of settlement patterns in Kahramanmaraş. In a general framework, pollen diagrams from Lake Van and Söğütlü have shown a very cool and arid phase in the late Pleistocene (9600-8500 BC), marked by a dominance of non-arboreal pollen. This was followed by a moist amelioration after 8500 BC with the movement of tree species into the area (vanZeist and Woldring, 1978; Wick et al. 1997). Pedological and geomorphological work at a number of sites in Northern Syria indicates a paleoenvironmental sequence that elaborates this very general framework (Courty 1994). According to Courty's interpretation there are five phases to the sequence:

Phase 1 extensive alluvial deposits and soil formation in the Early Holocene signify a warm moist regime before 6000 BC.

Phase 2 is interpreted as a dry episode in view of an influx of wind-blown sands and dates to 6000-5000 BC. This arid phase corresponds with the beginning of Halaf Period.

Phase 3 corresponds to renewal of alluviation and soil formation reflecting a return to moist environmental conditions with a date of 5000-3000 BC.

Phase 4 witnesses a slow shift to drier conditions with a decrease in alluvial sedimentation throughout the later Early Bronze Age (3000-1800 BC).

Phase 5 was marked by a severe drought during 1800-1500 BC.

Another Holocene environmental sequence is reported from the Konya Plain in Central Anatolia, largely based on geomorphological work combined with sediment cores and raised beach deposits (Erol 1978; Kuzucuoğlu et al. 1997, Roberts 1983). According to this scheme

23000-17000 BP (uncal), there was a freshwater lake extending across the plain, typically 30m deep.

17000-13000 BP (18200-13500 BC cal), the lake receded leaving the plain completely dry.

12000-11000 BP (12000-11000 BC cal), a moister phase in which five shallow lakes developed.

11000 BP-7000 BP (5800 BC cal), a dry episode returned in which these small lakes dried out and disappeared. The Neolithic occupations of Can Hasan and Catal Höyük took place at this time.

After 7000 BP (5800 BC cal), moister conditions were renewed with an increase in marshes until a severe drought occurred from 5000 BP onwards.

Rosen's (1998) findings are based on six geomorphologically examined sections in the Urfa Region of southeastern Turkey and correspond well with the studies mentioned above. The phases of climatic change that have been noted in this study make up the following episodes:

10^{th} –9^{th} mill.BC : Terminal Pleistocene/Early Holocene: intense aridity.

Mid 9^{th}-Mid 8^{th} mill. BC: Moist episode but still drier than today.

Late 7^{th}-Early 6^{th} mill. BC: Renewal of alluvial activity

Through the 6th mill. BC: alluviation ceases with a dry phase

5th-through the 3rd mill. BC: alluviation renewal with a moist phase

Mid Bronze Age through Late Antiquity: no alluviation with a dry phase.

These sequences indicate that following the intense aridity of the terminal Pleistocene, a moister episode corresponded to the Aceramic Period of South Eastern Anatolia and the Pre-Pottery Neolithic B (PPNB) of the Levant in general. Most of Kahramanmarash' earlier lithic sites may belong within this moister episode specifically in the Northern Basin. This episode corresponds to Courty's phase 1 where moister and warmer conditions continued through the 7th millennium BC. The 7th millennium is marked by the use of pottery in South Eastern Anatolia and the Kahramanmaraş Region.

During the 7th millennium BC, a continuing moist warm phase exists when the first pottery Neolithic communities of the Kahramanmaraş Region are established on the edges of the plain particularly in the Northwest. The earliest 7th millennium site locations, such as KM 8, 70, 129, 149 around valley edges, close to water resources make use of mixed subsistence environments.

According to the studies previously referenced, the late 7th and early 6th millennium BC may have been characterized by an episode of alluviation. However, this is short lived and alluviation ceases very soon and remains so throughout the 6th millennium BC. This dry phase is followed by a renewal of alluviation during the 5th millennium indicating a moist phase accompanied by oak/pistachio forest regeneration.

Resource Context of a 6th millennium BC site: Domuztepe's Catchment

Development of a large site such as Domuztepe may have placed major stress on the environment around it and precipitated a process of abandonment at the site itself. I will examine this suggestion. This section is also designed to provide a better understanding of the relative importance of farming and herding in the economy.

Climatic studies suggest that Domuztepe's growth took place during a drier phase that may indicate that the modern marsh may not have been a threat at the time. The history of marsh formation was probably dependent on a more complex series of events that are difficult to chart with the current understanding of the landscape formation. For example, the tectonic springs present at the southern borders of the marsh feed the wetland within which Domuztepe now exists (see Chapter 5: Hydrogeological Structure of Site formation). These springs must have been present at least since the early Neolithic as the 7th millennium site distribution suggests.

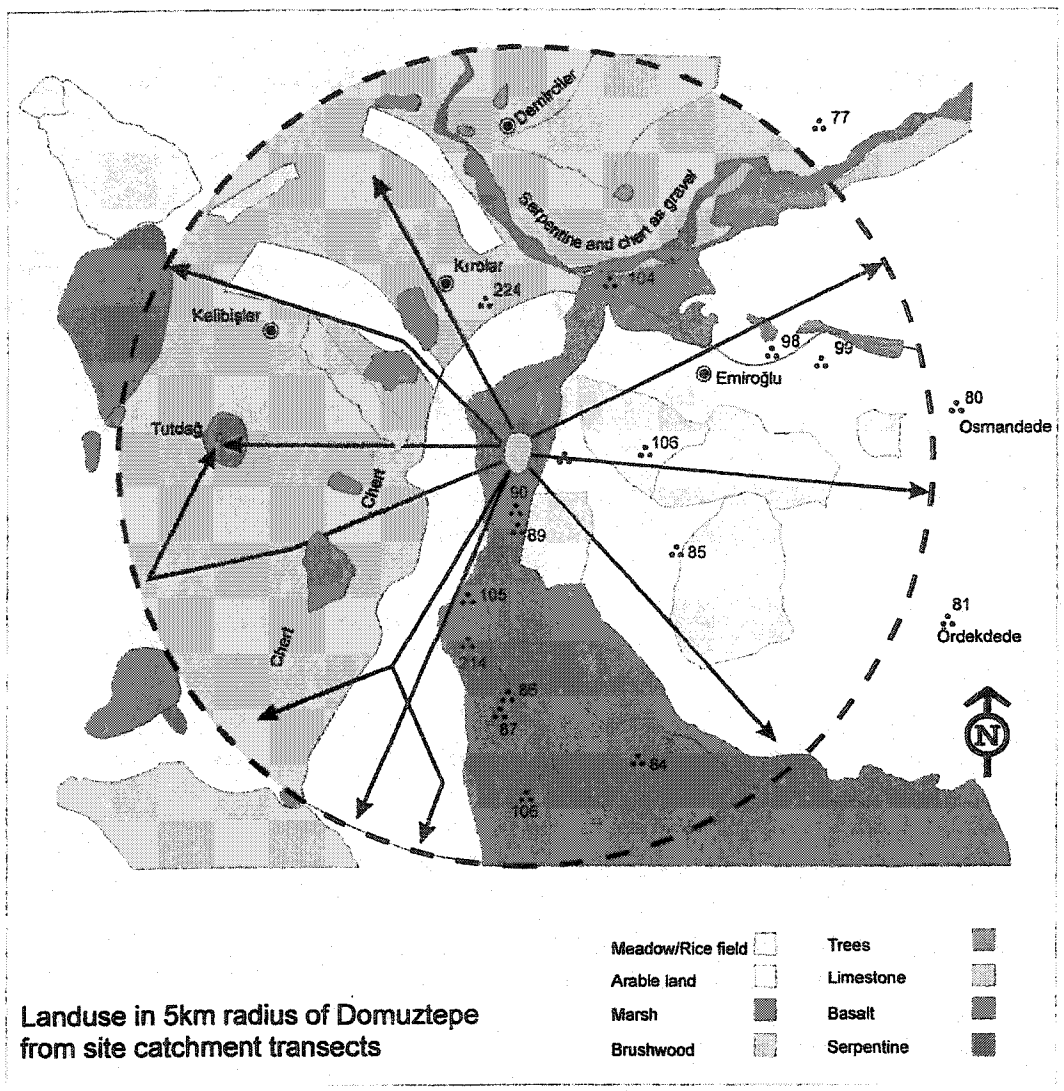


Fig. 7.6. Exploitation Territory of Domuztepe

For the moment, returning to the economic discussion of the site and its resource base, we may recall the general distribution of sites over the Northern sectors of the Fertile Crescent during the 6th millennium BC. Because of their distribution within the rain-fed zones of the Fertile Crescent, Halaf Period communities are assumed to have practiced some form of non-intensive dry farming technique of agriculture (Davidson

1977, Watson and LeBlanc 1990:4). In this context, shifting occupation can be a reflection of shifting agriculture (Akkermans 1990). Assuming that sites would be self sufficient, the immediate vicinity within 1 to 2 km of the site would be exploited and subsequently abandoned when the soil was exhausted.

On the other hand, extensive surveys of various faunal assemblages from different Halaf Period sites indicate that herding and associated pastoralists' mobility may have provided a substantial input in the economy complementing the dry farming exploitation of crops (Akkermans 1990), which generally centered on emmer wheat and barley with wide spread use of lentils, peas and a range of wide plants. According to Akkermans' synthesis, sheep and goat, followed by cattle and pig, dominate the faunal assemblages.

The relative importance of various strategies of subsistence may have changed from one area to another. For example, at some sites, hunting of gazelle and onager in particular appears to be a major activity. Based on existence of different types of faunal assemblages it may be suggested that some Halaf sites may have been involved in dominantly hunting-gathering strategies, resulting in short term or even seasonal occupations such as Shams ed-Din Tannira, while more permanent ones may have employed mixed strategies. At a different level, different geographic areas of the distribution may have employed different strategies.

Cattle were the last of the major species to be domesticated and were extensively exploited in the Near East during the 7th millennium BC. There is a substantial increase in the percentages of cattle bones in faunal samples during the

Halaf Period. Representation of "bucrania" images on the Halaf ceramics is interesting in this regard. The suspected population increase in Mesopotamia during this time was related to changes in diet rich in milk fats, which would induce early menstruation and increase in birth rate (Harris 1992). Matthews suggests that "the mystique associated with cattle in Halaf and other early farming communities may be an explicit manifestation of a realization of the true significance of cattle to these communities" (2000: 89).

To explore the relative proportions of subsistence strategies practiced at Domuztepe, a site catchment study was employed. Results from the Site Catchment study (Appendix C) indicate that given that rain-fed farming in a non-intensive regime was employed, Domuztepe's exploitation territory could have produced enough grain to house in the order of 1500-2000 people. While this gives an average of 100 people/ha for a 20ha site, the population on the site may never have reached such numbers and might have fluctuated significantly at different phases of occupation (Chapter 6). More importantly, the general distribution of grazing lands in relation to the agricultural plain within the 5 km radius also suggests that domestic livestock must have been an important constituent of subsistence.

The botanical and zoological remains recovered at the site may complement some of the suggestions of the site catchment study. The excavated levels of Domuztepe possessed a full range of domesticates (Campbell et al. 1999). Emmer is the most commonly found grain, followed by lesser quantities of einkorn. Free threshing wheat and barley and a range of other crops such as pea, bitter vetch, lentil and grass pea are

also present in the assemblage. Remains of fig and some other fruits along with linseed also appear. In general the remains on the site would appear to be from crop processing rather than primary storage.

The majority of faunal assemblage at Domuztepe is domestic (Campbell et al. 1999). Wild animals are represented in small numbers and include red deer, fox, gazelle, possible wild cattle, possible wolf or domestic dog and birds. Sheep and goat make up almost half the animals represented. Cattle and pig contribute to the assemblage significantly around 25% each. Analysis of bones by Sarah Kansa suggest that the relative proportions of meat consumed would be different than the statistics based on bone counts with cattle contributing more significantly to the consumption. Sheep and goat would certainly have required a wide range of exploitation territory. The slaughter of animals appears to have taken place within the site although such activity may have been constricted to certain areas. For example, operation III had substantial amounts of animal bones, particularly cattle (Campbell et al. 1999).

Dr. Kansa has suggested another interesting pattern in the analysis of zoological remains. Bone fusion from the cattle indicates a kill off of about a third of the sample by the age of four years, the point of optimal growth for cattle. The kill off pattern in sheep and goats shows that animals were being maintained to older ages, typically more than three years. This may indicate that these animals were exploited for milk, wool and hair. Although the kill-off pattern does not indicate an intensive concentration on one product over another, the maintenance of a larger number of adults and the absence of juveniles

may indicate that wool was an important product in the economy, and indicates intensive utilization of animals.

Understanding the nature of herding practices in prehistory has been problematic specifically for the Neolithic Period (Halstead and Jones 1980). There are an interesting variety of opinions about prehistoric mobility in the literature. For example, it is generally accepted that in areas where seasonal variations in climate are felt at extremes, mobile pastoralism should be considered as a timeless response that can resurface at any point in time given the social and environmental conditions permit (Bintliff 1977, Halstead 1981). Lees and Bates (1974) and Bates (1971) consider specialized pastoralism in prehistoric Mesopotamia as a contingent strategy of irrigation agriculture and state development. Large-scale and specialized pastoralism in this context has been argued to be dependent on existence of markets for exchange of pastoral and arable produce. Sherrat (1981) believes that a heavy dependence on livestock is related to the exploitation of livestock for their secondary products, i.e., milk, wool and traction.

Whereas some researchers would be content with the generic term "pastoralism" to refer to the practice of keeping herds, more recent considerations of herding frame the practice within its relative importance in overall economy, composition of species and associated settlement patterns (Halstead 1996). A careful analysis of the archaeological correlates of these variables can provide a much finer understanding of different strategies of herding spanning from specialized large-scale pastoralist activity to small-scale mixed farming or equally sedentary agro-pastoralism (Halstead 1996).

The "most specialized pastoralism" is expected to exhibit greatest dependence on livestock and highest degree of mobility. "Less specialized pastoralists" are typically semi-nomadic seasonal movement with most of the family residing in the mountain villages, while the men accompanied the flocks to the lowlands in winter (Halstead 1996). The scale of animal husbandry among "mixed farmers" is expected to vary greatly but generally proportional to the scale of farming (focus is on farming). On the other hand, for the "sedentary agro-pastoralists", the emphasis given to farming would be expected to be dependent on the scale of animal husbandry (focus is on herding).

Among sedentary pastoralists, Koster (1977) and Halstead (1996) observe an adaptation to areas marginal to cultivation. In this adaptation, herds of goats and flocks of sheep would be well represented, reflecting the relative abundance of browse in areas marginal to cultivation. Halstead argues that (1996), most sedentary pastoralists are agro-pastoralists and exhibit restricted mobility within the confines of the local community zones. Mixed farmers keep animals essentially for their manure and other primary and secondary products as well as a backup to a failed harvest. Flannery (1969) has argued that animal capital served as a vehicle for "indirect storage".

Halstead (1996) also suggests that while small-scale mixed farmers commonly keep a range of livestock to secure a variety of products and reduce the risk of wholesale loss through disease, most large-scale pastoralists specialize in a single species with representative individuals of other species for domestic purposes. Therefore, a faunal assemblage dominated by one domestic species would suggest large-scale herding whereas a mixed assemblage should suggest small-scale mixed

farming. Settlement patterns for the large-scale herding would exhibit short term settlement behavior whereas mixed farming groups exhibit more sedentary settlement behavior focusing on marshy areas combined with hilly zones for variety necessary to herd the animals within close range of the site of settlement.

The above discussion poses a few questions for the settlement patterns and relative degrees of subsistence practices employed in Kahramanmaraş. The simultaneous existence of both short and long lived sites within the same community zones make it difficult to assess the relationship between the occupants of the two categorically different site types. Do the temporary sites represent specialized pastoralists engaged in an exchange activity with the occupants of the long-lived sites? Or is the pattern primarily reflective of a shifting farming practice in a mixed dry-farming regime. The difficulty is certainly with definitive recognition of the degree of specialization on herding and exchange. At Domuztepe, sheep, goat, cattle and pig each contribute about 25% to the zoo-archaeological remains analyzed by Sarah Kansa. While the sheep and goat together make up half of the assemblage, they are not overwhelmingly dominating. Furthermore, Domuztepe's locational emphasis on an area where both marshes and rugged limestone hills make up a large portion of the exploitation territory suggests that the practices of herding fit small scale mixed farming strategy described above. In this context, I am more inclined to see the occupants of the small and temporary settlements as relations of the settlers of the long-lived sites, performing the routines of shifting agriculture. However, one certainly cannot deny the possibility of different strategies being employed in different areas of the Halaf material

cultural distribution. For example, in the Northern Basin of Kahramanmaraş, the site sizes, occupational span and distribution within much closer vicinity of the mountains may be suggestive of higher degree of specialization on herding. At places like Sabi Abyad closer to the 250mm isohyet, it was suggested that some groups specialized on herding and were in exchange relationship with the settlers of more permanent sites. The argument for Sabi Abyad is based on a large number of seals found in the Burnt Village, not a consideration of zooarchaeological remains in the manner described above. Nevertheless, it is possible that the degree of dependence on farming vs. herding may be different in the southerly areas of the Halaf site distribution.

In social terms Halstead (1996) makes an interesting argument for the social function of animal breeding. As the only foodstuff easily transported in quantity over any distance, livestock may have played an important part in maintaining the far-flung relationships between communities, already implied by the ceramic styles. The symbolic value of the animals specifically the cattle for the Halaf Period societies was mentioned earlier and is also reflected in the figurines of the time period.

At a different scale of looking at the strategies of subsistence employed at Domuztepe, we may certainly suggest that the size and long duration of occupation of the site must have placed an important stress on the soil around it, potentially causing a degradation of the resource base at a faster rate than that of a smaller site. It is perceivable that lack of complex political and economic organization may be a factor in the abandonment of community zones during the 2nd transition in Kahramanmaraş (Chapter 5).

The settlement pattern after the abandonment is marked by a shift in the structure of settlement development in the region. Small, less mobile and geographically dispersed communities appear in the 5th millennium BC. One may suggest a shift in balance within the economy. For example, it is perceivable that the early part of the 6th millennium may indicate mixed economies combining pastoralism and non-intensive farming. On the other hand, the 5th millennium (Ubaid) economies may be much more dependent on farming, a suggestion made elsewhere (Breniquet 1996) and will be highlighted again in the following pages.

Based on the clues of the intra-site examination of Domuztepe, together with the long-term regional perspective presented in the previous chapters, the discussion in the next chapter will attempt to model the spatial congruity and temporal continuity in nested scales of analysis. I will also examine the environmental and social contexts of site growth and propose an interpretation for the diachronic and synchronic variations observed in the settlement patterning of the 6th millennium Kahramanmaraş.

Climate, Subsistence and Settlement in Perspective

In the Kahramanmaraş Region, the first transition in settlement pattern occurs at the end of the 7th millennium BC, as the inner valley locations were gradually colonized. Both the introduction of Halaf pottery and the transition toward Ubaid occur within a millennium long dry episode, during the 6th millennium BC. During this time a shifting pattern of residence was employed at various temporal and spatial scales. The dry phase may be thought to have encouraged the agglomeration of social units in

circumscribed community zones dominated by sites of KM 67, 125 and 97. The shifting patterns of residential mobility within the community zones may have been employed to extend the range of exploitation base, under the new conditions. This perspective does not necessarily explain why there are differences in the spatial congruence of the community zones mentioned above, however. A closer look at each basin system suggests that there are some differences in the respective resource base of each community zone and these differences may be responsible from the variation observed in the congruity of community zones. For example, the small and dispersed nature of settlement in the North Basin may be related to its access to the environmentally most varied niches made up of rich river systems and high mountains existing within short distances of the farming zones. Relatively larger KM 67 is located in a suitable location for farming, whereas the largest Domuztepe is located at the edge of a marshy environment much less suitable for farming within its close vicinity. For the 6th millennium societies in Kahramanmaraş, we may tentatively suggest that the resource abundance (or variety) encourages a more dispersed and loose occupation, whereas resource stress (or reduced variety) encourages agglomeration of social units. Such a pattern is generally indicative of decentralized economic systems.

The process of abandonment during the second transition in Kahramanmaraş is more difficult to explain. It may be suggested that the community zones were abandoned as the resource base was exhausted after a lengthy period of occupation in the first half of the 6th millennium BC. The dry phase may have had different effects on different communities; each living in geographically varied areas, some more prone to

the effects of dry conditions than others. Such differences may account for the slight chronological variations in the abandonment of previously occupied community zones. This explanation does not account for why a structurally different settlement pattern developed after the second transition in the Kahramanmaraş region. The settlements of the 5th millennium in Kahramanmaraş appear to be isolated, dispersed and less mobile. Tentatively, it may be suggested that this shift is associated with an increase in the place focus which usually occurs as the relative importance of farming increases in the mixed economy.

Decentralized Economic Systems: Social Implications

There has been a resurgence of interest in understanding the ways in which political and social complexity can emerge in decentralized economic systems. For example, it has been suggested that justice in redistribution of resources is highly dependent on the obligations involved in return systems (Bender 1978, Arnold 1996). Such obligations may be structured by the moral bases of inherent inequalities such as kinship, gender or age. An important distinction has been made between immediate return and delayed return systems (Barnard and Woodburn 1988) which can be useful in how decentralized social units may eventually build up hierarchical networks that can be reflected in spatial patterns. They argue that in immediate return systems, return from labor is direct and used immediately. Thus, property rights and control of others' labor do not have a context in which to flourish. In delayed return systems however, labor can be invested in institutions that permit personal or family assets to be stored.

Further articulation of the spectrum of return systems has also been suggested in the concept of simple delayed return systems. In simple delayed return systems, household heads may control subsistence yields and the labor of household and other kin. However, they do not manipulate non-kin labor and they have no permanent power over anyone outside their families. It has also been noted that both in immediate and delayed return systems, the absence of institutionalized inequality stems from the lack of an economic, social, ritual or political basis for anyone to exercise permanent power over anyone else. Most importantly, this may happen because among other things mobility allows immediate return household members to move readily from unwanted constraints.

Hayden (1996) suggests that only prosperous conditions may permit social complexity to initially emerge. However, resource stress occurring at a stage past the threshold of some privatization of ownership could sometimes stimulate further complexity. On the other hand, Barnard and Woodburn (1996) think that when competition over scarce resources becomes severe in immediate return systems, rights over land and other assets may in fact be asserted by individuals to initiate more permanent social differentiation. If sharing is diminished and resource access is scarcer people will become more self-interested, status differences may become more magnified and opportunists may achieve greater success.

It has been apparent for some time that there is no particular relationship between settlement congruence, social complexity, subsistence practices and environmental conditions (Bender and Morris 1998, Ellen 1998). Relatively severe

subsistence stress sometimes causes a decline in spatially crowded organization, while in other cases it may result in increased hierarchy in conditions of labor and resource pooling. Hayden suggests that (1996), sharing morality and its obligations should be understood in terms of the social structuring principle that perpetuate them. According to this argument, the developmental path a culture will follow arises from the degree of entrenched private ownership of property and resources at the time of crisis. It is the ethics of sharing that will determine the path of this critical juncture.

In Kahramanmaraş, we may be dealing with societies in the range from immediate return to simple delayed return system of organization of labor during the Halaf Period occupation. The typical site sizes support an internal organization of communities incorporated around kinship ties. The site sizes in the Ubaid period do not change but the site locations in the 5th millennium suggest that people's relationship to the land was different. As argued previously in Chapter 5, the place focus of the 5th millennium BC is of a different nature and emphasizes a more sedentary and less mobile existence, which is usually associated with increased importance of farming and employment of intensive methods to work the soil (discussed in the next section). Such intensification is a type of investment, which encourages new understandings of the land and the material world in general.

In sum, in a long-term climatic perspective, I suggested that there is a climatic correspondence to the development of a shifting occupation following the first transition in settlement in the first half of the 6th millennium BC. The start of the dry phase may have allowed pooling of labor and resources in relatively severe dry

conditions of the 6th millennium BC. For the 6th millennium case, it may be suggested that the start of the dry phase at the beginning of the 6th millennium BC would have introduced a choice: either extensive or intensive exploitation of the landscape. While mobility and wide ranging shifting occupation may have been triggered under these conditions, it is important to note that some locations within the community zones were given repeated emphasis beyond the concerns with productivity. For these locations, the choice seems to be in favor of preserving the continuity of location.

The second transition and abandonment of occupational zones may be at first related to exhaustion of soil around long-lived and repeatedly targeted sites. As discussed in the "site catchment of Domuztepe", non-intensive methods of farming and emphasis on grazing may have eventually caused degeneration of the resource base especially around the repeatedly targeted sites. However, both small and frequently shifting sites within ecologically more varied and richer niches, such as KM 67, 69, 124, 125, as well as the larger ones, such as Domuztepe (KM 97) were abandoned (none of the sites mentioned to have long-term occupational histories during the 6th millennium BC give any representation of ceramics from the Late Chalcolithic or Early Bronze Age, indicating that they were abandoned before the end of 6th millennium BC).

Furthermore, during the 2nd transition, there were influences leading people not only to move to different locations, but also adopt a structurally very different pattern of occupation in the later part of the 6th millennium BC with no prospect of coming back to the previously occupied zones. I had suggested that this might be related to the

increasing importance of a different kind of place focus during the 5th millennium, which usually occurs in intensive farming societies.

It is difficult to explain the abandonment as solely an economic process since the chronological correspondence of this abandonment with the Halaf-Ubaid Transition in Mesopotamia is interesting and will be discussed in detail in the following sections. My suggestion is that the 2nd transition in Kahramanmaraş may have substantial social underpinnings as well as economic ones.

Land Tenure and Technologies of Subsistence

It is generally expected that place-focus will be more dominant with increasing technological and labor investment in food production. This is expected to increase the length of residential aggregation in certain locations as farming may increase population packing and encourage the targeting of specific places and promote a degree of landownership and residential stability (Bender 1990, Varien 1999).

Repeated targeting of specific locations may be more successfully considered in the concept of tenure. Tenure favors a place-focused, residentially stable pattern among small scale farming societies. Extensive farming societies are dependent on agricultural produce but with simple, non-labor intensive agricultural methods. Periods of fallow in this regime can be longer than periods of cropping. This method of farming is characterized by low labor investments in cultivation, high returns to labor and abandonment when yields decline (Stone, 1993). Within this context, place focus can be tight or long ranging within a micro-zone.

Land tenure is often linked to ideas of ownership and investment, which culminates in accumulation of wealth or power that may be difficult to risk under certain cultural contexts. Thus, among farmers, mobility may involve considerations of ownership, investment and access to places (Adler 1996, Varien 1999). In this view, mobility is often related to relinquishment of ownership in a particular location, whereas longevity is often attached to ownership, inheritance and potential hierarchies rising within this context. Eventually all forms of cultivation degrade the agricultural resources unless there is some form of intensification. Resource depletion results in increased production costs and often decreased yields. Among extensive agriculturalists, mobility is therefore stimulated by the decreasing yields. More extensive systems result in temporary tenure only so long as the land is being used. Intensification increasingly results in permanent private ownership and inheritable property (Netting 1993). Intensification also involves the construction of agricultural facilities as well as more substantial residences and storage with the result that people are reluctant to give up these investments. In time, the land becomes an artifact with its divisions and manipulations, inscribing and regulating social relationships.

The issues surrounding the direct correspondence between movement and ownership are more difficult than conventionally accepted. In non-state societies social forms are flexible and commitment to traditions and beliefs can structure a major part of the settlement patterns. In such contexts, mobility can be triggered by variety of factors. It entails movement that may be part of an ongoing strategy of shifting residence, a reorganization of local social and economic patterns, or a migration. Among the Halaf

Period communities, social arrangements may have been relatively flexible and kin based. People were relatively autonomous at household levels and able to employ movement as strategy for addressing various economic and social issues. Movements were also structured by social commitments to places and to traditions and beliefs. This may have encouraged a variety of settlement forms, some with a tight focus of population aggregation on certain nodes, some with a more flexible understanding of "focus". The latter would present itself in use of a relatively wider range of space within which movements still can take place.

A type of land tenure may have motivated people to return to some locations repeatedly during the 6th millennium BC. This may be the access to land use that the group is associated with. The practice of burying the deceased in close association with settlement (Chapter 8) or leaving other burials of artifacts may have marked the continued attachment of people to places. Such marking would also be important in social contexts lacking central authority in order to establish inheritance rights to be claimed in returning. These practices may well fit with each other perpetuating and reflecting certain visions of community, place, identity and material world.

This perspective may explain the tenurial relationships in different agricultural regimes but it does not explain why the abandoned sites of the second transition were never returned to. Some of these sites, such as 69, or 67, were certainly in agriculturally suitable areas and the soil around them would have regenerated in a few generations. I believe that this problem requires an in depth understanding of the changes that took place in practices surrounding death, specifically the changes in the spatial

configuration of burials. I suggest that during the second transition, the new ideas of tenure, ownership and investment perpetuated new understandings of the material world and places. As the perceptions of the material world were rewoven in a new canvas, the role and significance of various materials along with the places changed. The following sections will expand on this suggestion.

A Note on Tenure in the Late Neolithic: Social Context of the First Transition in Kahramanmaraş

In social and economic terms, it has been suggested that development of the 6th millennium short term "shifting" occupation stands in contrast to the 7th millennium patterns of "clustering and pairing" (Akkermans 1990). Based on this an interpretation has also been given that;

> "any traditionally bound territorial claims on landownership such as can be inferred from the earlier long term clustering had largely lost their meaning. Large sites with long history still existed and there can be little doubt that these sites held certain territory. It is felt that man-land relationships (during the 6th millennium) became increasingly loose in nature. The Halafian farmer for one reason or another rapidly exhausted his environment and was then forced to move on."(Akkermans 1990, 97)

Obviously, it is a major question why complete abandonment did not happen at the larger settlements of the 6th millennium, albeit shifting occurred either within the territories of the tell (e.g. Domuztepe's surface collection) or in a wider range (about 2 km between 67 and 69). I suggest that a close look at the variations in mobility during the 6th millennium BC vs. the 7th millennium pattern reveals that it is difficult to strike a line between "shifting" and "pairing" strategies mobility (fig 8.3).

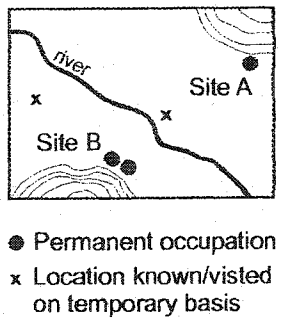


Fig.7.7. Clustering/Pairing typical of the 7th millennium BC.

Settlement pairs are closely associated mounds; the "daughter" site usually lies within 100m or less from the original settlement. Examples are sites such as KM 8 and KM 9. Such pairing is also observed in the 6th millennium sites of Sabi Abyad, Yarım Tepe or perhaps Domuztepe. In time, this physical separation may merge if differential occupation deposits are very close to each other, creating a large site size.

In social terms, pairing of households or sites of settlement by a few households may indicate social boundary marking. Such a move doesn't change the range of exploitation area but distances members of the original group from one another. As previously discussed, the variations in the range of such mobility observed during the 6th millennium BC may be related to the climatic change and the need to establish wider claims on resources in risky environments. However, the close association of short-lived sites with the long-lived ones indicates that a focal location within a community zone was repeatedly targeted albeit on fluctuating scales. In this context, shifting and pairing appear as variations of the same behaviour. That is to say, shifting occupation in

the 6th millennium BC can be a variation on the range of pairing. What is common to both 7th and 6th millennium patterns is that a location where continuity of presence was established.

Whereas the climatic conditions and fluctuations in the resource base may be responsible from the diachronic and synchronic variations in spatial congruity, the 6th millennium pattern is perhaps not so much of a contrast to the 7th millennium in terms of the structuring behavior generating it. In the case of the 6th millennium, the centers of long-term attention are always in a network of other small or temporary sites that can be detectable via survey. Drier climatic conditions of the 6th millennium coupled with the increased place focus and wide scale symbolic interaction through ceramics may be suggested to have taken their tolls at a larger scale for the later Neolithic communities. The social landscape was structured within a context of mixed subsistence practices that grew out of the necessity to establish more stable resource base in an increasingly sedentary decentralized society. Meanwhile the decisions regarding settlement strategies were determined by the protection and maintenance of the biographical continuity of a certain location. The significance of continuity represented in long-lived tells of the 6th millennium may have developed within similar traditions that were employed both by the 6th and 7th millennium communities.

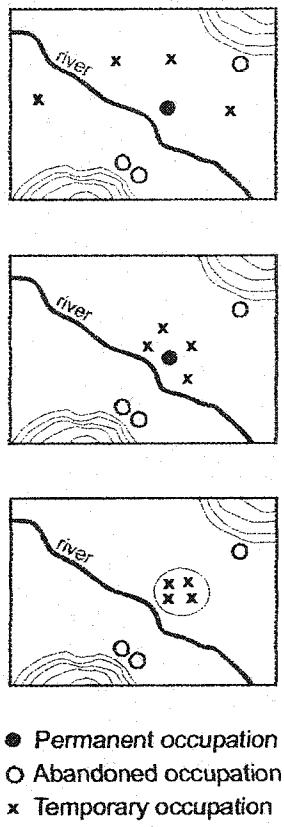


Fig. 7.8. Variations of Shifting during 6th millennium BC, note the varying degrees of focus on the same location

There are supporting clues in favor of considering the shifting pattern as a variation of the 7th millennium pattern of clustering and pairing. As the small amounts of pre-Halaf ceramics found on the surface suggest, the long-lived sites of Kahramanmaraş (67, 97, 125) were known locations by the beginning of the 6th millennium BC. Although at this time the mid to late 7th millennium sites such as 8-9 and 70 were abandoned, they may have been partially contemporaneous with long-lived/repeatedly targeted sites of the 6th millennium BC (97, 67 and 125). Or, equally the ceramic continuity presented between these sites may suggest that these later

locations were at least known and visited in some intervals during the 7th millennium. For example, Domuztepe, KM 67 and KM 125 possibly date back to the late 7th millennium BC.

An interpretation around suspected land-ownership for the 7th millennium BC or equally a relationship that is loose in nature during the 6th millennium may also need revision. They can potentially be variations of a similar understanding of the community and place. Furthermore, as suggested in Chapter III, such an understanding can be very different than the modern understandings that link individuals and objects. It is in such different frameworks that the long-lived tells and short lived occupations gain particular meanings and values. The contradictory nature of archaeological interpretations around political complexity may be a reflection of this tension between the modern archaeologist and the past.

Settlement, Subsistence and Ceramics: Social Processes

Albeit at different times, the later 6th millennium process of abandonment is observed in all of the long-lived Halaf Period sites of the survey region whether they were located in richer ecological niches or not. The abandonment during the second transition roughly corresponds to a Halaf /Ubaid transition in Mesopotamia which has been defined mainly on the basis of a gradual change in ceramics from Halaf styles to Ubaid styles (Breniquet 1987, 1989, 1996), generally corresponding to the increased use of bichrome and polychrome vessels and appearance of so called bow-rim jars. The social and economic underpinnings of this transition are not well understood however.

Ubaid sites in northern Mesopotamia appear small and dispersed, some with continuous occupations since the Halaf Period, as discussed in Chapter 2 and 5). By the Later Ubaid Period, more substantial changes reflected in burial practices become clear and will be discussed in Chapter 9.

In the Kahramanmaraş region a subtle alteration in settlement patterns during the later 6th millennium BC can be identified paralleling a transition in ceramic styles. By the 5th millennium BC in the area, many of the 6th millennium sites were abandoned in favor of a more dispersed distribution emphasizing different locations and connections within the basin systems as discussed in the previous chapters. Ceramic relationships between Domuztepe-96-67 suggest that such a transition appears to be gradual and should have taken place within the existing norms of residential mobility (Chapter 5).

According to Breniquet (1996), the Halaf-Ubaid transition in mid 6th to late 5th millennium BC in Northern Mesopotamia is related to various technological changes in farming and also in ceramic production that spread from Southern Mesopotamia to Northern Mesopotamia at this time. This eventually led to new social organization which formed the basis of ever growing political complexity in the area. This may well be the case for some parts of Northern Mesopotamia. Considering the suspected effects of a long dry phase during the 6th millennium, adoption of more intensive technologies of agriculture may not have been a major decision for some North Mesopotamian communities. Specifically the communities living close to marginal zones would have

been prone to infiltration of intensive agricultural techniques and associated ideas of the material world.

For example, site nucleation and possible centralization of societies can be suggested for North Iraq during and after the Halaf Ubaid Transition (e.g. Tell al-Hawa, Wilkinson 1990b). Although, such nucleation and politically more complex social organization remains a possibility for Kahramanmaraş, no evidence of such development have been observed before the Bronze Age. More interestingly, none of the recorded Halaf sites in Kahramanmaraş present evidence of a growing political complexity as they were all abandoned before the end of the 6th millennium BC.

For the case of Kahramanmaraş, where the modern rainfall is around 700 mm, we may wonder if intensive agriculture would be the choice of strategy at the time. From a complementary perspective, we may consider an increase in population, which may have induced more intensive forms of agriculture to be employed. Yet, the site size histograms throughout the 6th millennium do not point toward a population increase but rather a population movement from certain micro zones to the Central Zone. The Southeastern basin where Domuztepe is located, seems to have fallen out of favor as the Central Basin and perhaps North and Southwestern Basins gained more population (Chapter 5).

The case of Kahramanmaraş during the 2nd transition can be framed around the way an intensive system of agriculture that can perpetuate new ideas about relations to the material world and induce different forms of economic and social organization. For example, with intensive investment of labor in intensive agriculture, various concepts

around ownership, inheritance and social division of labor could potentially form. The case might be that primarily these concepts were attractive to the Halaf Period communities in Kahramanmaraş, rather than the technological practice itself during the 2nd transition. This transition, which led to the abandonment and emergence of a structurally different pattern in the survey region, may be the final stage of a long-term accumulation of factors that were locally shaped and supra regionally triggered.

A Change in Social Life of Settlements: Transitions toward the Chalcolithic Period in Northern Mesopotamia

In Northern Mesopotamia, the changes in the patterning of settlement and ceramics during the Halaf-Ubaid Transition are often associated with new practices of burial. In Kahramanmaraş, there are similar changes in the patterns of settlement and ceramics observed during the second transition, which chronologically corresponds to the Halaf-Ubaid transition in Northern Mesopotamia. Although, as of now, Kahramanmaraş does not give any evidence of the 5th millennium mortuary practice, the association observed in Northern Mesopotamia may be helpful to understand the wider background of the second transition in Kahramanmaraş. Therefore, this section will expand on the nature of mortuary practices during the 6th and 5th millennium in Northern Mesopotamia from the particular perspective provided by the practices of burial. I will briefly consider the Halaf, Ubaid and Later Chalcolithic mortuary practice and explore potential applicability of the process in Kahramanmaraş. My particular

focus is on the contextual relationship between the place of burials and the place of settlement.

The known record for the Halaf period burial practices come from occupational contexts. It has been suggested that this is a result of traditional tell centered excavation approach in the Near East (Akkermans, 1993). Whereas this may well be the case hiding a wider range of possibilities where the dead may have been buried in a larger landscape context, there are significant parallels in the traditions surrounding burials in the Neolithic and Halaf time periods.

The Halaf Period excavations at Arpachiyah (Mallowan and Rose 1935, Molleson and Campbell 1995), Yarım Tepe (Merpert and Munchaev 1993), Girikihaciyan (Watson and LeBlanc 1990), Mersin (Garstang 1953), Tepe Gawra (Tobler 1950), and Sabi Abyad (Akkermans 1995) have yielded a record that appears highly varied in nature yet combining various similarities in manipulation of bodies and other artifacts. Depending on the context, this variation ranges from single and double pit inhumations, mass interments, skull manipulations to individual or mass cremations. There are also cases in the way the dead bodies may have received differential treatment perhaps in relation to age (Akkermans 1993). Furthermore, in some cases it would appear that the individuality of the person was emphasized while in other cases more communal aspects of the group materialized in the dead body were emphasized at final burial.

Mass burials are known from Tepe Gawra (Tobler 1950) and Mersin (Akkermans 1989) both of which belong to the later stages of the Halaf Period in

Northern Mesopotamia. While the Tepe Gawra burial appears to be a mass inhumation, the record from Mersin shows that the bodies were exposed to fire before burial. On the basis of the mass burial of the bodies, it has been suggested that the usual emphasis on the individuality of the dead was not a feature at Gawra and Mersin. Furthermore, the symbolic sequence of events at Gawra is highly reduced, although we may suspect potential deficiencies in their recognition during excavation. Based on this absence, it was suggested that the burial indicates a case of famine or plague (Tobler 1950).

In Mersin, "an unknown number of adults, some sherds and two incomplete broken vessels were found in level XIX. Both the ceramics and the bodies show similar patterns of burning and indicate that they accompanied each other at the time of exposure to fire" (Akkermans 1989: 81). Mass burials in certain contexts may be associated with abandonment of a certain location of the site. This activity may at some level be of a similar nature to the destruction of the Sabi Abyad Burnt village or the Arpachiyah Burnt house (Chapter 3).

Yarım Tepe II was reported to have cremations but in rather individual contexts. Cremation graves would appear to represent secondary burials (Akkermans, 1993). The layout of the cremation pits in Yarım Tepe has been suggested to reflect that the dead were cremated within a short period after death had occurred (Merpert and Munchaev 1993). Both at Arpachiyah and Yarım Tepe II, skulls have been reported to have received some sort of special treatment. These treatments indicate that there are several stages to the process. The body may have been left to decay at some place and checked

upon. Subsequently the skull was removed and perhaps used in some other ceremonies until a final burial time came. In some cases the skulls may have been buried separately.

It is difficult to suggest a chronological development to the burial practices during the Halaf Period. Equally, it is difficult to suggest a centralized belief system. Rather, the highly varied nature of the practices point toward locally oriented and decentralized communities. However, local variants of perhaps widely employed practices, such as cremation and burial of at least some bodies in settlement contexts can be suggested. Interestingly, there is no demonstrable age separation among the bodies found buried in settlement contexts; both adult and child burials can be found, albeit in varying percentages (Merpert 1993, Akkermans 1989).

Burial practices of the slightly later Northern Ubaid period have been reported to point to a differentiation between adults and children particularly (Akkermans 1989). Whereas the children could be found in excavated settlement contexts during the Ubaid Period, adults were rarely found indicating a different area than the settlement context for their burial. The Arpachiyah burials belong to the earliest stages of the Ubaid in the North. It is a cemetery, not on the mound proper but on the lower ground to the west of the settlement. There are 45 graves mostly simple inhumations with no overlapping of burials (Akkermans 1989). At Tepe Gawra (Forest 1983) from the same time period, hundreds of burials were found in the settlement context mostly simple inhumations belonging to infants and children. Adult graves on the other hand, occur in a separate area again outside the settlement. Excavations at Yarım Tepe II also support this

picture. According to Akkermans (1989), there may be a differentiation among burial patterns for children, young adults and adults based on grave good analysis.

Moving further in time, the Later Chalcolithic evidence from Gawra shows a much wider spectrum of practices surrounding burial (Forest 1983). There can be urn burials, tombs made of stone or mud brick, covered graves and a wider variety of grave goods indicate more diversified and less regulated practice, similar in nature to the patterns observed in architecture. Out of the 80 tombs belonging mostly to children recovered in Gawra XIA-VIIIB, 5 tombs had extremely rich grave goods including stone bowls, ivory and gold objects, shells, beads, turquoise and lapis lazuli (Akkermans 1989). Forest (1983) suggested that an elite group occupied the mound at this time, while the commoners may have lived beyond the boundaries of the mound. The site of Gawra has extensive public structures associated with only a few domestic buildings supporting this view.

One may remember from the discussion in Chapter 2 that Ubaid settlements in Northern Mesopotamia are usually very small around 1ha, rather isolated and often short term, very similar to Halaf in a lot of respects. Small sites do not appear to exert any power beyond settlement level; each appears autonomous, more so perhaps than the Halaf period (Wilkinson 1990). Kin relations appear to be most important in the organization of communities although the nature of such organization have been difficult to establish. Although in terms of the settlement patterns the image is of strong local continuity from the Halaf Period, the material cultural aspects of this continuity

has been thought to point toward further interregional unification that was to prepare the basis for the Uruk expansion.

Specifically, the tripartite buildings known from Southern Mesopotamia make a strong appearance in the Northern Mesopotamian contexts. Tripartite building structure is an architectural hallmark of the "Ubaid" and usually associated with the gradual formation of secondary states in the North during the Uruk expansion. Toward the Uruk expansion and gradual evolution of states in Northern Mesopotamia, tri-partite buildings have been argued to decline (Akkermans 1989) and greater variation in architectural layout was suggested to point toward greater freedom by individuals to employ different architectural techniques. In contrast to the disappearance of tripartite buildings from daily life, temples and large residences continue the tripartite tradition in a monumental form. A real distinction between monumental public architecture and domestic architecture was argued to be clearer as the development of temple and rise of elite groups has been closely associated. According to Akkermans (1989), the appearance of public/religious architecture is associated with the rise of institutionalized hierarchies. In Kahramanmaraş, although the 5th millennium settlement pattern may be indicative of a social organization similar in nature to what was described by Wilkinson (1990), there is no indication of Uruk influence in the area.

While a distinction in monumental vs. domestic architecture appear to take place in Later Chalcolithic of Northern Mesopotamia, the differentiation was already visible by Ubaid 3, in architecture of Eridu in the South (Wright and Pollock 1986). While the particular articulation of architecture indicates the rise of central authority and power

structure behind it, preceding stages give very little evidence as to the nature of such a development during the Ubaid of Northern Mesopotamia. For Northern Mesopotamia, the situation was interpreted that the newly entering prestige items were functioning to legitimize the status of individual in the hierarchy, possibly by drawing from a new pool of places and relations signaled to the local population in the access of these artifacts (Akkermans 1989b). Akkermans suggests that in the North appearance of temples is associated with individuality and social inequality within settlement sites. In the south on the other hand, temples may have been associated with collectivity, a symbol of unity, intended to create an image of representing the interests of all members of the community. According to Akkermans, in the south social differentiation may have started earlier while contradictions were offset by strong emphasis on the communal.

Whether this is a mirror image of the society or not, the point is that in the south temple contexts deny social contradictions by stressing collective behaviour to the elimination of the individual. According to Akkermans (1989), we may envision a highly institutionalized and formalized society for the south while we may suggest the rise of highly independent locally oriented small socio-political units in the North. The Uruk Period in the south is seen to have a unitary character similar to that of its preceding Ubaid Period, although the contemporary settlements in the North give evidence of a highly autonomous and dispersed social organization. D'Altroy (2001) partially in tune with Akkermans' earlier suggestion proposes that religious organizations of the Uruk Period may have functioned differentially in relation to needs of collaboration or competition. In this regard, the increasing emphasis on irrigation

agriculture has been associated with the collaborative situation in the south. On the other hand, the subsistence economy in the North can be much more varied depending on where the communities are in relation to the margins of the rain-fed farming.

In Kahramanmaraş, we have observed that the Halaf-Ubaid transition in ceramics, (i.e. Domuztepe A2-A3 and Post Domuztepe at 67 and 96 specifically) is accompanied by a gradual abandonment of focal sites of the 6th millennium BC (KM 97, KM 67, KM 125). Although Domuztepe's abandonment may be the first sign of this gradual change, the local transition appears to have been of a long duration expanding into the centuries of late 6th millennium and finalizing with the complete abandonment of long-term Halaf occupations during the 5th millennium BC. This is a pattern not exactly paralleled in many sectors of Northern Mesopotamia. In Northern Mesopotamia, Ubaid, as it was in the South, formed the foundations of the Uruk expansion and formation of states in this region. One may suggest that the second transition in Kahramanmaraş and the Halaf-Ubaid Transition in Northern Mesopotamia may be influenced by common factors, albeit resulting in divergent paths.

Northern Mesopotamia may have been seen as a sphere of symbolic richness perhaps long recognized in the processes that culminated in wide scale distribution of symbolically important objects such as obsidian and the painted ceramics. In the North, the local Neolithic histories embedded in some objects may have continued to structure the development of elites and a social stratification toward the Later Chalcolithic. On the other hand, in most places of Northern Mesopotamia as Forest suggested (1983) for

Gawra, the use of the ancestral tell-spaces during the Ubaid Period was perhaps limited to a small group who could claim rights of ownership to the surrounding land.

Farther North in Northern Mesopotamia at places like Domuztepe, where the climatic change was not as critical as it was in the marginal areas, the segmentive nature of community formation may have resulted in the process of abandonment rather than flourishing of a new elite with rights of ownership to ancestral places. The situation can be considered as a reflection of different trajectories within Northern Mesopotamia. For example beyond divisions between an Eastern vs. Western or Northern Halaf vs. a Southern Halaf, a mosaic of local histories and practices shaping the nature of differential developments during the 6th millennium BC can be suggested. Within this view, it would be difficult to give prominence to any part of the mosaic as each may have contributed to the gradual development toward merging of different value systems and structuring principles of connection between artifacts and people.

Chapter 8

Understanding the Settlement-Burial Relationship: A Redefinition of Tenure

Before I further examine the significance of spatial congruity and temporal continuity from the perspective provided by a communal burial context called "the Death Pit" at Domuztepe, I wish to propose a redefinition of tenure through which the exploration of different relationships to the material world can be possible. As suggested before, the nature of tenurial relationships that settlement mobility represents may be sought in the 6th millennium practices of agriculture. Extensive farming indicated by shifting cultivation requires little investment in terms of agricultural technology. In this type of agriculture major subdivisions of the landscape would not have been attempted (Barrett 1994b), and access to cultivable land was secured as part of the mosaic of resources over which "the community" exercised its rights. In such a practice, access to cultivable plots would have been claimed through the rights of membership to the general community.

Incorporating aspects of biographical continuity can be suggested to be dependent on the continuity of the community in a materialized locality, a repeatedly targeted location or settlement. The fixed (long-lived) settlement location may have been a place where status of membership to community was negotiated and materialized so that the access to cultivable land or other resources were secured. In the context of frequent residential mobility, this connection to place may have mediated resource access.

A more subtle understanding of relations to the material world is necessary for it is the structuring principles of this world that linked people and objects. At this juncture, duration and terms of occupation or mobility can be considered in terms of a new definition of tenure. Ingold (1986; 140) argues that tenure is:

> "a way in which a resource locale is worked or bound into the biography of the subject or into the developmental trajectory of those groups, domestic or otherwise, of which he is a member."

This view of tenure shifts the discussion to an understanding of relationships between the people and the material and social world of landscape. The definition furthers an understanding of the social context and suggests that transformations in settlement patterns arise out of a shift in the interpretive strategies by which people were able to fix themselves within certain "imagined communities" (Barrett 1994b) that existed in mental geographies. In Kopytoff's words (1986), by linking the biography of the agent to that of things, places, times, the imagined copresence of others who may be geographically distant or dead may be evoked. At this juncture, a bridging argument can be made that connects the theoretical stance to the representational world of settlements where we see residues of particular types of conduct with the material world. Such particular types of conduct bind the agents to certain regions of time-space as a way of situating their own lives within the biographies of larger communities. This construction is akin to creation of meta-narratives that imbue significance on the material world. Various behavioral patterns that are synthetically separated within modern understandings of the world such as the economic activities of agriculture vs. the more formal world of rituals.

In Kahramanmaraş, sedentism and mobility were strategies that were employed simultaneously during the 6th millennium BC. I suggest that a mosaic of resources were exploited with the practice of residential mobility in a relatively fixed understanding of "biographical continuity" represented by the long-lived sites. While an image of a corporate unit emerges in the fixation of certain locales, there is also an opposing image of the community with mobile segments relatively independent in certain decisions. The nature and quality of community formation is hidden in this duality for the 6th millennium BC landscape. In this respect, the large size of Domuztepe can be contextualized as the close association of various decentralized segments socially, economically, and conceptually were diverse.

Genealogical relations are by their nature fluid and dependent on cycles of life. In communities that are structured by genealogical relations, particular effort may need to be given to demonstrate links and to preserve membership in place-communities. The monitoring of particular places by segments of the population via successive links to them may be considered to have created symbolic capital to be used in social relationships. In the forging of new social relations, one's demonstration of historical ties to the place may have legitimized his/her membership and status in the community, through which a share of the resource base could also be secured. The pattern is rather reflective of social practices and traditions surrounding construction of communities and access to resources within that specific understanding of community. The message hidden in the permanent occupational sites of the 6th millennium BC was primarily about continuity and permanence of the "community" and investment made on such

symbolic capital of historical length of rootedness. In that understanding, the status of membership may have needed to be continuously negotiated rather than inherited.

More importantly, the variety in symbolic artifacts (stamp seals, obsidian etc.) may have grown with the same process as monitoring of such ties grew more complex in nature in a predominantly incorporating practice. Distribution of objects such as seals and obsidian may be indicative of such growing complexity in a context of spatial crowding in essentially a decentralized social system. Symbolically laden objects may have structured a temporary hierarchy among the groups of occupational zones and may have functioned to mediate sharing of resources at some levels. In time access to these objects may have been more restricted as population grew. From an evolutionary perspective, the sites where such investment has been made should have continued to be in a prime position to exert power over the new social organization of the subsequent periods. On the contrary, all the recorded Halaf Period sites in Kahramanmaraş were gradually abandoned during the 2nd transition. These places may have been abandoned as the narrative structures that imbued value to the objects and linked them to the people gradually transformed into the new structures of value. The tells of the 6th millennium BC had a much different role then we conventionally believe, as they fixed people within cultural narratives and the "imagined communities" fostered by those narratives.

This transformation may indeed be more substantial then simply being a ceramic change. As Breniquet's suggestion (1987, 1996) may be remembered: a major technological and ideational change may be two of these factors. The impact of the technological and ideological changes can also be seen in the disappearing relations

among the artifacts of Late Neolithic legacy during the Halaf-Ubaid Transition. In this context, the diachronic relationship between settlement and burial is significant and was elaborated in the previous section.

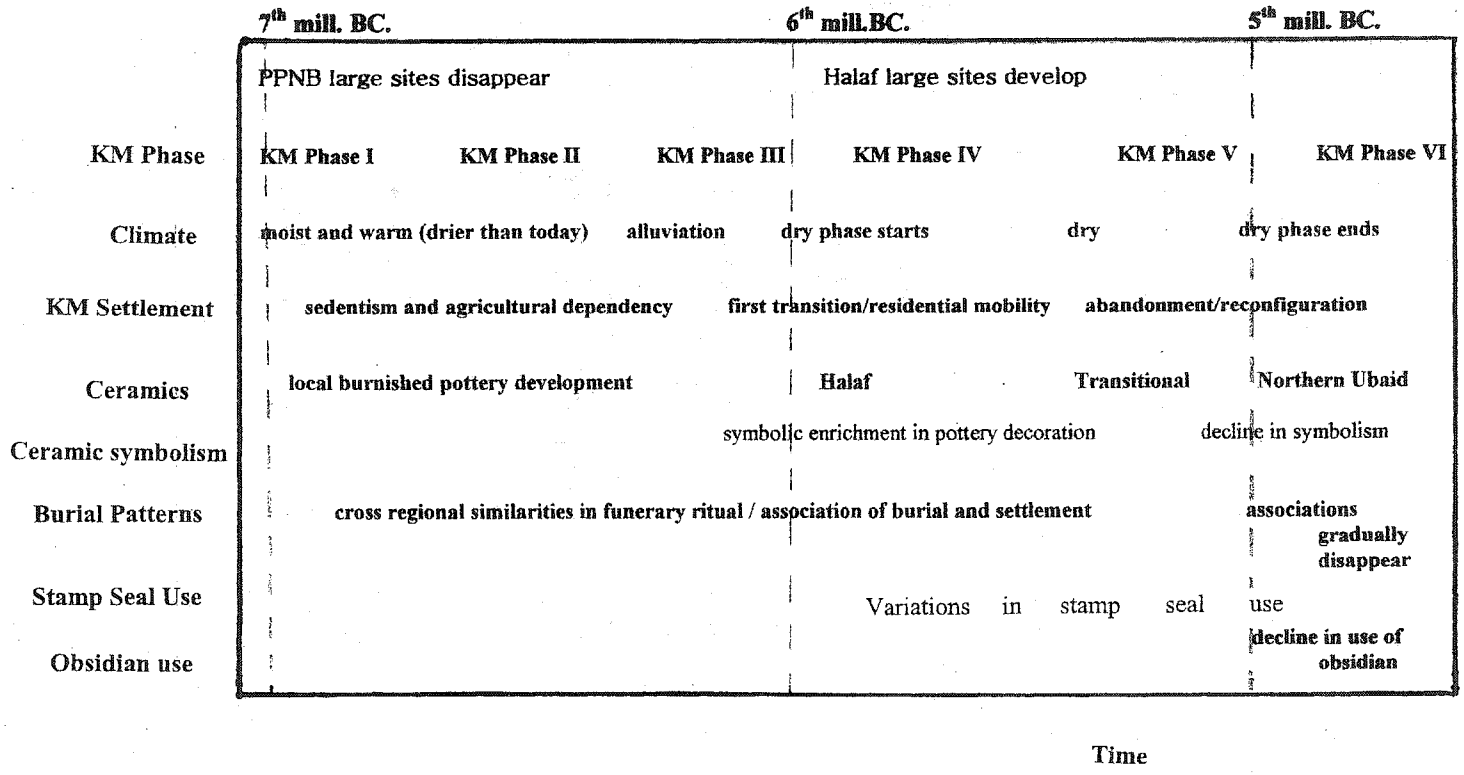


Table 8.1. Potential Correlations between the material culture change, climate and settlement during the 6th millennium BC

Ritualization of Settlement: Ancestral Practices in a Landscape of Tells

Mortuary ritual was an integral part of the routine of ordinary living for the 6th millennium communities. Activities surrounding death and burial often took place in residential contexts and communicated spatial messages about particular elements of social identity over generations. My argument in this section is built on the premise that the patterns of preservation and destruction surrounding the 6th millennium mortuary ritual in residential contexts give particular clues to the nature of the connection between the people and the material world. An understanding of this connection may also shed light on the social significance of spatial congruity and temporal continuity during the 6th millennium.

The "Death Pit"

(The evidence discussed in this section and the details included in Appendix D have been provided by Dr. Stuart Campbell, the excavator of the Death Pit)

The so-called Death Pit at Domuztepe consists of a pit that was constructed in a single episode (Carter and Campbell 1997, Campbell and Carter 1998). Its filling constitutes various phases including placement of skeletal parts in a medium of mud (Appendix D). The skeletal parts may have been interred elsewhere before they found a resting spot in the Death Pit. However, the duration of the body in this transitory place is not clearly understood.

The pattern of settlement before and after the Death Pit is interesting (fig.8.1 and 8.2). The area previously had domestic occupation in the close vicinity of the Death Pit

deposit. After the event, this area was left free of residence for a few generations until a slow recolonization started. The excavators suggest that a post might have marked the location of the Death Pit where remains of approximately 40 individuals from crosscutting age and gender groups have been recovered (Campbell et al. 1999). As the surface collection of Domuztepe suggests, after the Death Pit event, the whole site may have gradually contracted to a point of final abandonment.

When the construction of the Death Pit starts, the area of Operation I may have been an open ground for some time. According to Dr. Stuart Campbell, the excavator of the Death Pit, there was no occupation on the lower terrace to the south of the pit. He suggests that even the phase A1 occupation on the terrace to the north belongs to an earlier ceramic phase (fig.9.2). A shallow sub-rectangular pit is dug into the edge of the terrace running across Operation I and the soil dug from the terrace is re-deposited to build up the southern edge of that pit (fig.9.1.phase I). Fill A then is placed in the bottom of the Death Pit (fig.9.1.phase II). This fill lacks human remains but includes mixed fragments of animal bone, including pig and cow bones. After fill A, there are two phases of silting, both with uneroded surfaces suggesting a short period of evaporation after rain or after the Pit was filled with some liquid as part of the ceremony. A second insertion of animal bones is possible between the phases of silting and may be called Fill B.

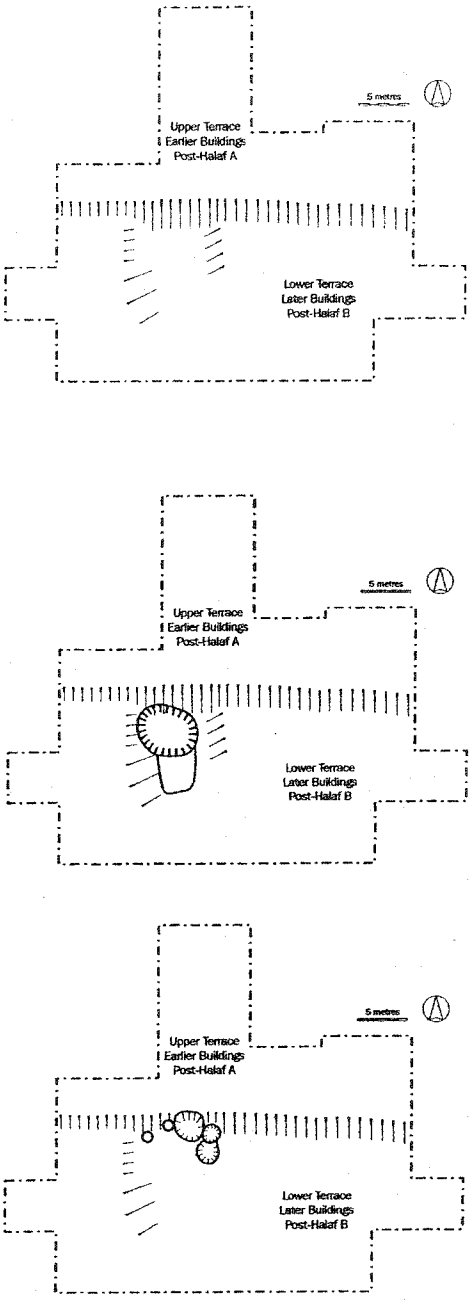
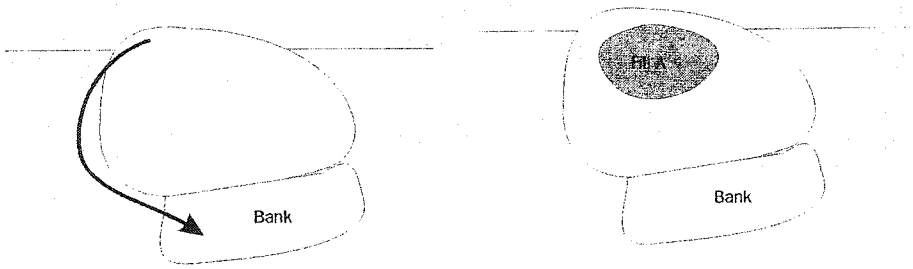


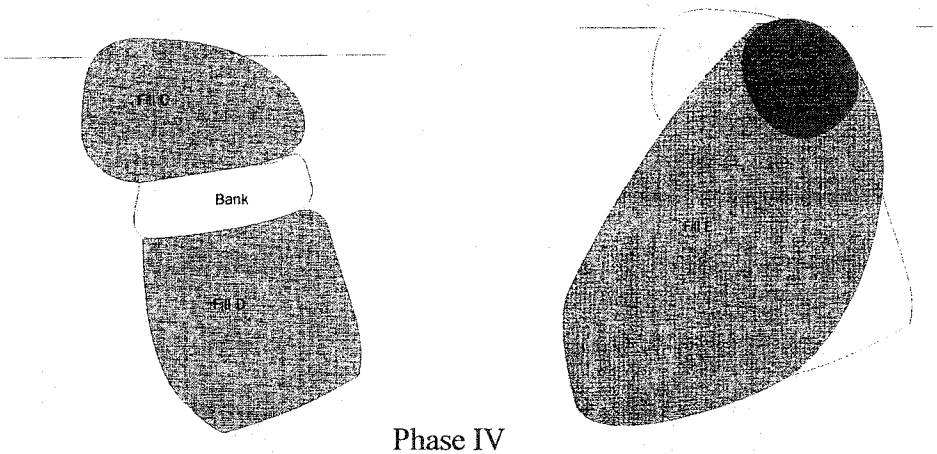
Fig.8.1. Spatial Context of the Death Pit within the Area Excavated

Two fills are then placed, broadly at the same time. The first fill is in the area of the Pit itself and consists of human and animal bones packed in a pise matrix with patches of ash. It seems to have been packed very hard into wet soil. The fill seems to be used to construct a raised hollow above the original cut of the Death Pit (fig.8.1.phase III). Fill D is placed to the south of the bank and seems intended to raise the surface area there closer to the level of the raised hollow. Fill D seems to consist of primarily domestic debris. There are few or no human bones and animal bones seem much more splintered than those in Fill C. Toward the final stages of the activity, the raised hollow and the slope to the south were filled with a dense ash deposit, called Fill E (fig.8.1.phase IV). Although human bones only seem to be placed in the hollow itself the fill here is the same as that running south. A burial in a basket was placed on the southern margin of the ashy spread at this point. Although the actual fill of the Death Pit ceases with the ash, there are later associated deposits, which show a continuing focus of significance and activity in the same location. Two post holes suggest a marker (totem?) of some kind and a series of pits are cut adjacent to the Death Pit filled with an identical ash to that of the Fill E of the Death pit itself. A later adult inhumation was found buried to the south of the Death Pit. Following the events, an area of 20-30m across remains clear of domestic occupation for a sustained period in the order of two generations perhaps, although in the later stages there is no evidence of ritual emphasis in the location.



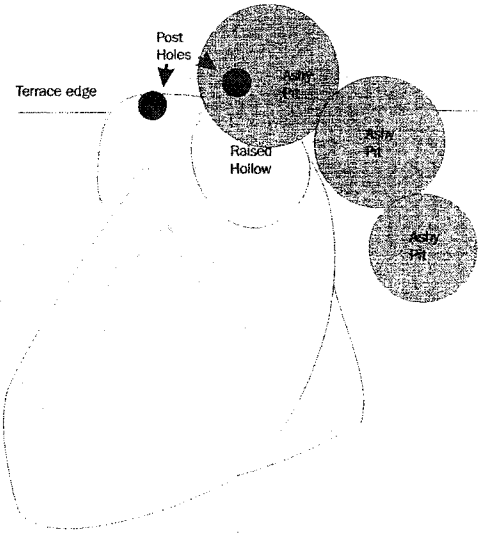
Phase I

Phase II



Phase III

Phase IV



Phase V

Fig.8.2. Construction of the Death Pit (original drawings by Stuart Campbell)

It will be remembered that the Death Pit event is chronologically very close to Domuztepe's abandonment, approximately in the order of a few generations. Furthermore, the site was not used as a settlement again for at least five thousand years after the abandonment. The location of the pit at Domuztepe appears to have preserved its significance for a few generations with two posts potentially erected as totem poles (Campbell et al. 1999). This event may have been significant in the social life of the place-community and could have transformed the significance of a particular location at tell into a "monument", albeit ephemeral and short term.

Previous Approaches to the Neolithic Mortuary Ritual and Society in the Near East

Much of ritual activity of the Neolithic era has been studied from functional perspectives. For example, the interaction of burial and residence has been assumed to reflect tension points between a social unit and community, sacred and profane, public and private spaces (Byrd 1994, 2000). The discussion has been generally around an attempt to capture social segments within a system of settlement rather than an emphasis on the nature and structures of life around the activities surrounding death. While understanding of size and economic nature of relations between the segments that form the community can be achieved from analysis of burial practices, we can also see burial practices construct a much more substantial link between people, places and the

past (as proposed under the subject of "the structuring principles of social order" in Chapter 3).

Some elaborate studies of how funerary practice may be interpreted toward an understanding of the deeper structures that condition everyday lives come from PPNB contexts. Despite the chronological discrepancy between this earlier phase of the Neolithic and the time period under study here, we may methodologically underline some analytical perspectives. For example, in the PPNB case, house floors are frequently observed to have provided a context for the primary burial of the body. This has been interpreted as the highlighting of the house as the primary social context of the time, death as the metaphor for life (Hodder 1990) and a major structuring divide between the house and the larger community. Very often following the primary burial, the skulls were removed, crafted and included in more public events or displays.

Goring-Morris (2000) suggests that the treatment of adult skulls followed a trend throughout the PPNA and PPNB toward more elaboration. More importantly, this appears to parallel the growth in site size and community. Skull removal may have reflected the particular importance of the individual, but the gradual evolution of the practice has been suggested to indicate the emergence of ritual hierarchies serving to encourage social cohesion (Goring-Morris 2000, Bar Yosef & Belfer-Cohen 1989). On the basis of the seeming absence of the differentiation in the size and nature of domestic architecture in the Levantine PPNB, it has been suggested (Goring-Morris 2000) that the differentiation of status must have been primarily negotiated in the context of the extended family rather than at the community level. This differentiation was linked to

certain developments in wealth accumulation and its subsequent inheritance in household contexts (Goring-Morris 2000).

Although a suggestion can be made about the accumulation of wealth in PPNB household contexts, further details of the routine interaction of the living with the dead should be explored. For Domuztepe's Death Pit case, I believe that the individual dead did not just signify the house to which they were genealogically related. Selection of a communal burial place within the settlement suggests that the relations among the living, as well as between the living and the past may have been ordered by the burial place (refer to the next section: anthropological perspectives on rituals surrounding death).

For the PPNC phase at Ain Ghazal in Jordan, Rollefson (2000) sees major departures from PPNB traditions. Specifically, the most obvious evidence of this departure is the absence of decapitation of burials. During this phase a further difference is that the common location for burials was in the courtyards. Rollefson argues that burials including certain animal bones may be indicative of a special relationship between incipient ovicaprid pastoralists and the full-time resident farmers who husbanded pigs.

The PPNC evidence form Ain Ghazal (Rollefson 2000) shows some parallels to the evidence from Domuztepe. At Domuztepe although there was some excitement with the skull treatment, this wasn't as elaborate as the PPNB case. Furthermore the inclusion of animal bones in the Death Pit, especially of cattle may be significant. Cattle

were the last animal species to be domesticated in the Neolithic and was symbolically important throughout the Neolithic period of the Near East (Cauvin 2000).

At the very least, from an economic point of view, the uncertainties involved in life and perceivable solutions in PPNB communities were very different to that of the 6th millennium BC communities. The hunting-gathering mode of life was still a viable option for the PPNB communities while the 6th millennium BC communities strongly relied on agriculture and domestic livestock. However, both cases may reflect a similarity in the pattern that connect people, places and objects.

Anthropological Perspectives on Rituals Surrounding Death

Various theories of approaching ritual and its role in communicating important messages to aid social formation have been explored. Whereas the earlier functional approaches tended to view ritual as a mechanism necessary to integrate groups in reaction to economic stress, several different facets of ritual activity have been put forward since Durkheim (1965). For example, since Turner reintroduced van Gennep's rites of passage into a general understanding of all ritual activity (van Gennep 1960, Turner 1969), we accept that ritual performance structures the link between the individual and community. According to the latter and influential theories, messages of danger associated with separating from community are conveyed in the "liminal" phase so that the group or individual going through a transition, is more informed of his new responsibilities and ready to reintegrate into the society.

The place of ritual is usually assembled according to practices that evoke familiar traditions, express meaningful ethos and reflect specific community structure.

Evoking a history of practices and beliefs requires a place as context that is different than other places and uses. Elaborating on place, timing and bodily movement in the context provided by the traditions of society make an appeal to the past where answers to current problems is believed to reside. The danger from loss of meaning associated with change, such as death or some unforeseen event, can be dealt with by creating a known environment within which individuals perform in predictable schedules and traditionally prescribed ways (Berger 1967). Thus, ritual activity creates a safe place against influx and uncertainty.

More recent articulations of ritual theory relocate ritual as a practice in a wider perspective. Specifically Bell (1997) has reframed ritual in the context of a recent social theory of structuration (Giddens 1984). This approach has important implications for the understanding of the funerary practices of the Near Eastern Neolithic in the context of ordinary places of residential life. Bell (1997) suggests that ritual can be viewed as a variety of routine practice (Chapter 3). The variety can be measured in relation to the intensity of elaboration and focus given to preparation of place and scheduling. Effects of ritual depend on the degree of people's involvement, the amount of ritual repetition, degree to which the values are exposed in the deep structures of the ritual are reinforced in other areas of social life. This approach acknowledges the seamless connection of the formal "ritual" and the ordinary living in the tell context. In this respect, ritual practices leaving a visual reference in the daily space of residence such as the Death Pit can be interpreted to be a special kind of contract between the living and space; a statement with repercussions overreaching the moment of its action.

In a cross-cultural study, Metcalf & Huntington (1991) analyze various activities that may take place during death rituals. They propose that an important aspect of funerary practice concentrates on the involvement of the living and the dead as the gradual extinction of the social person takes place. The decaying body is noted to be associated with the endurance of social relationships it represents. In this regard, the intensity of focus on the body of the dead person usually attempts to provide a controlled environment for biological decay. Secondary treatments and burial observed in many societies may be related to this association through which control of decay in perceivably more secure contexts of private homes or special places is achieved. On the other hand, the secondary burial is often associated with a communal context.

In such contexts, the intermittent situation between the biological death and the final burial may take long time periods. During this time period, the corpse can be placed in a special location and checked upon occasionally to see if the body is ready. Certain kinds of processing and curation can manipulate the process beyond its biological imperatives and effect the time of transition. For example, defleshing can be a kind of processing, while embalming can be considered as a curation technique. Similarly involvement of fire in death rituals can be associated with a type of control that purifies and controls decay. Some techniques in treatment may have similarities to manufacturing techniques such as pounding, cutting and fermentation in pots. These types of secondary treatment can happen soon after death but usually last months or years until a certain other cycle is achieved such as a harvest season. Therefore the final burial is not necessarily initiated by biological process of decay.

In the case of the Domuztepe Death Pit bodies, a combination of the processing, curation and decay at a special location might have taken place before final burial. Presence of approximately 40 individuals also suggest that death might have taken place at different times while bodies were collected, cured, preserved till the communal burial time was achieved. Different treatments may have been given to different body parts and/or to different individuals. As the excavators indicate, some skulls may have been carried in plaster pots whereas other bones were possibly carried within basketry. Certain parts of the skeleton such as skulls, finger bones and vertebrae may have been removed and potentially circulated around, while in some cases defleshing may have taken place. Patterns of fire and cut marks on some bones may indicate exposure to fire while the flesh was still attached. The patterns of fire marks may be significant and indicate a ritual consumption. Some bodies may have been temporarily buried in close association with houses and checked upon frequently by opening the plastered floor and reclosing as suggested by the excavators Karina Croucher and Stuart Campbell.

Although variations are noted, one important aspect of the communal death rituals is the presence of a feast and consumption. Inclusion of animal bones in the death pit may be related to such a feast. In such contexts of feasting, destruction and breakage of various artifacts is known from famous "potlatch" and interpreted as sealing of social relationships or releasing of social spirit represented by the artifacts (Rosman and Rubel 1971; Vertovec 1983).

Breakage of pots, burning of houses, processing and final inhumation of bodies can all be viewed as different ways of destruction/deconstruction ultimately functioning

to filter a memory of the past. Consumption, breaking or dismemberment may also help to forge new relationships in the context of sharing and releasing the spirit. Dead bodies can also be thought as such artifacts that continually transform social relations until they are memorialized in a certain way through a final communal burial in the case of Domuztepe.

An important aspect of the whole sequence of events is the preparation of space for ritual (Fig.8.1 and 8.2). The space of the Death Pit was prepared in a single episode that may have taken a few weeks or month. The death pit is located in a prominent position on the southern mound in close association with the residential areas of the tell. The size of the pit and the elevated space around it suggest that a significant amount of audience may have been present and viewed the event from various angles. Judging from the amount of ash present (Appendix D), the fire and smoke must also have been visible from a long distance away. The shape of the space and use of mud to build it may have helped to evoke metaphorical relationships.

While the general area was residential before the event, after the event a post was placed to mark the space of ritual. This area was left free of occupation for a few generations and was subsequently slowly recolonized. However, judging from the surface collection of Domuztepe a more substantial process of final abandonment of the site must have started about the same time. Recolonization in a few generations reflects a short term concern with the memory of the event, ready to be molded in to daily life as community's remembrance faded away. On the other hand, the Death Pit may also

reflect a point of major alteration in the occupational history of the site of Domuztepe ultimately leading to the final abandonment.

Each one of the activities surrounding the burial in the Death Pit can be assumed to represent a complex grid of social concepts and relationships, as they became part of the ritual. A transition from life to death does not necessarily happen at the moment of biological death as many ethnographic examples suggest. Similarly a final burial does not take place immediately after biological death. Decay similarly can be controlled and manipulated to effect the time of transitions. Otherwise some other culturally specific event can affect the timing of transition. Although the presence of the dead is essential to consider the whole sequence as a funerary ritual, the process neither seems to start with the death of an individual nor does it appear to end with his final burial. In the context of destruction and disposal, different constituents of memory may have been manipulated, appropriated, transformed and ultimately reproduced through a reconstruction of the material world in burial space.

Each one of the activities integrated at the Death Pit event may have had repercussions in a multiplicity of life sequences, extending from daily routines to generational life cycles, requiring varying degrees of elaboration, involvement, attention and timing. For example, a number of individuals who may have died at various intervals may have waited for the right time of final burial. During the time they waited, activities around the body should have required special attention and their organization must have affected routines of daily life and social structuring around it. Someone or some group may have been directly involved with the activities to control decay.

In the case of Domuztepe, several different techniques may have been employed in varying contexts. The contexts and timing of curation is not clearly understood at the moment. While there may have been various scenarios involved in the treatment of the dead, we do not know if everyone received similar treatments at death but we can say that they were disposed of in a similar fashion. The condition of the human remains may be suggestive that while some individuals may have been dead for some time and went through different processes, others may not have waited too long. Nevertheless, the wait time cannot be too great to allow an observable difference in the condition of bones.

The Death Pit deposit is an intermixed age and gender group. However, this grouping may also be related to the cause of the death such as a major plague. Although it can not be rejected as a possibility, the simultaneous death of 40 people would have been a major event in the life of the Domuztepe community. Even in the case of a site as large as Domuztepe, this would be at least 5% of the population if not more. Obviously many assumptions would need to be revised in the future. Did other communities bring their dead to Domuztepe as well? Did these people die in a longer time span and subsequently were reburied? Are there other Death Pits on the site? Or was this really a major event perhaps associated with dispersal, which was to start soon?

Living with the Dead

In the previous discussion, I emphasized that many routines of community life may have been centered on the activities surrounding death. The way the deceased were cured, processed, circulated and consumed between the time of biological death and the

more important social one reflects a long-term subtle but central concern with their existence. This requires an ordering and sharing of activities around preparations toward the final burial. In return, these funerary practices promote a conception of time and an affinity between particular people and fixed locations (Thomas 2000).

The individual dead as an artifact may not have been considered truly dead until a secondary communal burial had occurred. In the Neolithic context, until the communal burial occurs various parts of the body may have been used in the life cycles of communities with which they were genealogically associated. Various parts of the body can be placed under house floors, used in various important gatherings and perhaps sometimes put together with other dead bodies, continually forging the social relationships of the living both to each other and to particular places. We may imagine a similar significance attached to dead in the 6th millennium context of Death Pit. The intersection of burial in settlement space reflects a biography of a community's effort to propagate itself in continuously changing conditions.

All the different spatial contexts the dead body was placed before the final burial may highlight a particular social concept negotiated along the divisive lines of the society. In relation to this, various stages leading to the final burial may structure various relations of the living. Secondary treatment and burial may be a statement acknowledging both the private and the public in a society without institutionalized community structures. Finally, the preservation of spatial memory reflects the concerns of community in the interplay of present, past and future.

It may be interpreted that after the dead body forges and defines a variety of relationships in the lives of communities (Metcalf and Huntington 1991), a burial is made to memorialize the history of those relationships at a particular location of the settlement space. A periodic time may have been set aside for a communal ritual. At that point, it may be suggested that the dead becomes an ancestor to be located within a communal burial as a final witness to the social relations s/he represented. In the tell context, social construction of space was a continuous rehashing of memory preserved in the growing tell deposit. Furthermore, mobility and abandonment at the micro-regional scales may be linked to the practice of living among the dead (Stevanovic 1999, also see the discussion in the next section). However, clearing of space in the settlement requires abandonment of that part. As the memory of the event, the location and the dead fade both in physical and mental landscapes, the space can be slowly recolonized as in Domuztepe.

Destruction, Mobility and Memory: Remembering by Forgetting

The timing and organization of events leading to the Death Pit ritual appear to be complex and indicate that many activities before and after the burial including settlement mobility were ordered around the presence of particular constructions of the past and social identity around burial space. Despite that a short-lived memory of the burial place is also interesting as the location was recolonized after a few generations. This may indicate that the particular constructions of memory and death were more concerned with the present than the past itself. Rather than preserving the mass grave

for a longer time in a separate and articulated place, the memory of the event was molded into daily life by embedding itself into the growing deposit of the living tell.

Recent research on the Neolithic suggests that settlement, abandonment and ritual could have been intricately tied to each other in that this association had an immediate bearing on the social and spatial structuring of residential community. For example houses would be deliberately burnt at the end of their perceived use life as known from Opovo (Stevanovic 1997), Sabi Abyad (Verhoeven 1999, 2000) and Arpachiyah (Campbell 2000).

Burning of houses in Bulgaria has been reported as an important indicator of a social reconfiguration of the residential (kin?) group associated with the house (Stevanovic 1997). It has been suggested that the houses were built with materials to be burnt at the end of their use life. Furthermore, the mark left on place after burning would ensure continuity while it anchors a community's history to a locale.

In the Near East, the Burnt House TT6 at the Halaf Period site of Arpachiyah has recently been considered in this context (Campbell 2000). Although a small site, the burnt house at Arpachiyah has produced an incredibly rich artifact assemblage in situ. Campbell argued that this burning was intentional and that the richness of symbolically important artifacts reflects a type of social death chronologically very close to the site's abandonment. Similarly, the Burnt Village at the early Halaf Period site of Sabi Abyad has recently been argued to reflect a deliberate burning associated with abandonment and potentially death of its occupants (Verhoeven 1999, 2000).

From a comparative standpoint of abandonment rituals; it is possible to highlight some of the crosscutting activities present both in abandonment associated with Death Pit and other mentioned cases of abandonment. Present in all cases of final abandonment, there are varying themes of destruction and disposal effecting the demise of various artifacts. For example, fire was used in all cases, breakage of various artifacts such as pots and figurines have also been noted. Rituals involving the presence of fire, destruction and fragmentation of a variety of objects can be part of a comparable system of social reproduction. Such rituals may have been employed at various times in the life of a community. The Death Pit at Domuztepe could be replaced within a tradition of social reproduction, which combined elements of fire, destruction and abandonment in a different ritual context. Furthermore, such activities of "remembering by forgetting" (Chapter 3, Connerton 1989, Bradley 2002) may have structured landscape formation at a wider scale. In this context, dismemberment and particular manipulations of the body after its biological death can be tentatively considered in the category of artifacts to be disposed of with the intention of creating a particular meaning and articulation in space.

In all cases, after a publicly visible event, the space of the event was left abandoned indicating particular attachments between settlements and people other than perhaps primarily economic ones. In the house burning case, the burnt house must have memorialized the event; in the burial case (e.g. the Death Pit) posts may have marked the place of communal ritual for a certain time. Abandonment of space after ritual is related to the intended effect on memory in aiding appropriate social reproduction of a community. The effects of this memory reinforced a specific relationship to past and

future. Activities around burial and abandonment must have cemented the event in demarcated space, which was to effect the upcoming generations' spatial configuration and social action. The techniques of memory preservation are interestingly short lived during the 6th millennium BC in contrast to effects of monumentalization. Monumentalization attempts to articulate and fixate a particular moment or event in space deliberately separated and abstracted in its construction from the mundane act of living. In the construction of social space of 6th millennium BC tells, we see that the individual memories of past events were short lived and buried in time in the tell deposit, such as one may also find in the PPNB.

The kind of non-articulation or short term survival of spaces of deliberate destruction and deposition may in fact fit well with the image of society with a different connection to the material world. Neither were the dead individuals articulated in space nor was the memory of the event separated from the destructive effects of routine of life. In a narrow sense these phenomena can be interpreted to include incorporation and sharing in communal contexts structured by status of membership in place community (Chapter 3 for a discussion of incorporating vs. inscribing practices).

On the contrary, by the Late Chalcolithic in many sectors of Mesopotamia, the dead are increasingly difficult to find in settlement contexts as discussed in the first part of this chapter. There is also no evidence of the diachronic change in burial practices in the Kahramanmarash region and in the future many of the arguments may need to be reevaluated. However, the shift in settlement and burial practices observed in Greater Northern Mesopotamia may be associated with the suspected infiltration of new

techniques of agriculture and new concepts of land tenure. This shift was also reflected in the material culture patterning of the whole of Northern Mesopotamia as the symbolic enrichment in ceramics declined. We may at least conclude that the settlement shift during the second transition in Kahramanmaraş reflects the seemingly gradual yet profound effects of a major transformation and correlate with the suspected infiltration of new concepts of landscape and gradual decline in material culture of the 6th millennium BC.

Chapter 9

Summary and Conclusions

Background:

Any settlement, archaeological or modern, is typically considered in terms of its exploitative relationship to the environment. In this relationship, sedentism and the subsistence strategies of the inhabitants are assumed to structure the economic background for the development of more complex political organization within society. Thus, in many settlement pattern studies, there is a primary concern with understanding the organization of subsistence production and management of surplus in the development of complex redistributive mechanisms.

This concern often narrows the way the prehistoric record is interpreted, however. It is true that the 6th millennium landscape of Northern Mesopotamia show signs of emergent complexity in the form of site size growth at places such as Domuztepe, Kazane, Takyan and Nusaybin as discussed in Chapter 2. Strong indications of long distance and local exchange of elite objects such as stamp seals and obsidian artifacts along with spread of a complex symbolic pool also support the argument for an increasingly complex society. However, the overall picture that would confidently place the societies of the time period in to a cultural evolutionary model of complexity often lacks firm evidence.

Firstly, although large settlements exist, site size hierarchies cannot be established. A major portion of the settlement pattern of the time period is composed of small (1-2 ha) sites scattered on the landscape with only an occasional large site, such as

Domuztepe. Furthermore, the evidence for frequent mobility and abandonment make it difficult to investigate the actual size of a site let alone the nature of social, economic and political nature of the ties among the groups that inhabit these landscapes. Secondly, as discussed in Chapter 2, studies conducted on stamp seals, obsidian objects coupled with the recent perspectives on processes of living and abandoning a site of inhabitation indicate that there may have existed certainly complex connections, yet of a different nature, between people and the material world. Emphasis on the economic aspects of social complexity may only partially shed light on the overall context within which the value systems form.

This dissertation has been built on a premise that the modern relations between the material world and people may distort the nature of inquiries, methods and interpretations of the archaeological record. At best, this tension between the modern archaeologist and the archaeological record can be defined as a culture clash if one is to explain it in popular terms. The discipline of archaeology has carved itself a powerful niche in both academic and political discourse today. It is widely accepted that understanding and interpreting the prehistoric past is under the archaeologist's control. The archaeologist's job, however, should not be to re-validate her/his own cultural perspective by projecting it to the past but to use this inescapable standpoint as a comparative frame of reference. This stance opens a dialogue with the past through which the significance of artifacts and places in the past social worlds, they were embedded in, can be explored.

Recent approaches to landscape archaeology particularly developed in Northern Europe and Britain focus on "structured deposition" to investigate different connections between people and the material world in the long-term analysis of the past. Specifically the social canvas that interconnects and imbues significance upon that material world has been successfully explored in these approaches where fundamental philosophical theories regarding human existence, material world, time and memory have been employed to explain the effects of structured patterns of deposition, preservation and destruction on the patterns of social formation.

At some level one may argue that, "ritual" contexts have regularly been approached through an analysis of structured deposition and that the concept is not foreign to archaeology. Although this may be the case, there are substantial differences in underlining assumptions between the conventional and more recent approaches to structured deposition and ritual in archaeology. Conventionally, the archaeological literature associates "ritual" behavior with inexplicable and culturally specific traditions. Whereas the cultural specificity of the "ritual" is often acknowledged in this context, the interpretive attempts often shy away from exploring the suspected social and cultural context in a narrow attempt to locate the functional significance of ritual behavior in the economic and political organization of societies. There is, however, a fundamental flaw in presuming a superficial analytical division between the inextricably linked phenomena of human existence, i.e. the ordinary and the formal, or equally the functional and the ritual.

According to the recent studies, it is understood that ritual is seamlessly interlinked to the ordinary routines of human lives (Bell 1992). In methodological terms, the mundane and the structured can be studied as two ends of the same spectrum as variations in the degrees of emphasis given to formality of behavior. The dimension of formality is defined in terms of the degree of preparation of place and scheduling of events and number of people joining the event. It can be assumed that in highly formal events (typical rituals), important narrative structures of the communal as well as the individual lives are expressed through symbolic behavior, which often results in structured deposition amenable to archaeological study.

A wide body of archaeological literature attempts to link the material evidence of "structured deposition" into the structuring principles of life in prehistoric contexts, sometimes under headings of "social life of artifacts" (Appadurai 1987) or "Ancestral Landscapes" (Edmonds 1999). The latter term is particularly suitable to draw attention to the power of the past and tradition in the organization of societies. In this context, it is argued that structural patterns in deposition of artifacts provide a reflection of the "suture" between past, present and future, i.e. people's understandings of the nature of history in the prehistoric contexts. Ultimately, the diachronic change that archaeological interpretations attempt to explain may be sought in changing understandings and narrative constructions of history in prehistoric societies.

Some approaches to the archaeological record underline that the variations in practices observed in structured deposition can be explored through the long standing debates around communicative differences between oral vs. literate cultures (Chapter

3). A finer model has been proposed for locating the role of material culture in the debate, through the concepts of incorporating vs. inscribing qualities of artifacts (Chapter 3). It is argued that these two poles of the material culture practice can construct and foster very different visions of the world around seemingly similar objects. For example, the issue of chronotypic aspects of construction of the material world has been dealt with and linked to the differences in cultural practice. In this context, some argued that in societies adhering to incorporating practices, cyclical notions of time may be represented in the destruction and re-occupational cycles of settlements and that this may be an important reflection of the social formation.

More importantly, it is understood that "ritual" in societies, where incorporating practices around artifacts prevail, can be specifically difficult to distinguish from the "mundane". A prime example of such difficulty has been demonstrated in the link between death and place of settlement during the Neolithic of the Near East. In recent studies of the Arpachiyah Burnt House, and the Sabi Abyad Burnt Village, residential mobility and abandonment of settlements have also been linked to rituals surrounding death and cessation of biographical continuity of place-community. The clues from these studies indicate a peculiar link between settlements and people, and bring about new questions to ask of settlement patterns. From this perspective, settlements can be viewed as artifacts. In the patterns of mobility, abandonment or long-term emphasis on a location, we may underline some structural patterns in a similar vein to that of structured deposition, destruction or preservation of artifacts. In this context, settlement structures gain meaning and significance in social contexts in which they play a crucial

role in the process of remembering and forgetting. In return, the narratives highlighted in the remembered vs. the forgotten reveals the nature of social formation and nature of change in prehistory.

As I suggested previously, such patterns have been successfully explored in landscapes of Northern Europe and Britain where "ritual" features, such as monumental henges, were focused upon. The monumental features can be easier to approach as artifacts of ritual deposition since they are not associated with functional daily activities such as housing and subsistence. Coming back to the Near Eastern prehistoric landscapes, all we are faced with is "tells". They appear to be so much of a part of the land that they are difficult to approach as anything but ordinary places of inhabitation.

In the observation of the Kahramanmaraş landscape, I used recent ritual and landscape theory to observe the deposition of settlements on the landscape in a diachronic perspective. This stance allowed me to explore the mundane and the ritual spheres of behavior simultaneously. Accordingly throughout the dissertation, I sought to understand the structural patterns in the relationship between the social formation and its representation in the temporal continuity and spatial congruity of settlements. I specifically attempted to understand under what conditions some sites of the 6th millennium BC were repeatedly targeted whereas the majority of the rest were occupied only temporarily; and what should this observation indicate about the nature of society and nature of change in prehistory.

I also explored a new interpretive framework to understand Late Neolithic developments in the Northern Fertile Crescent. My approach was based on an

understanding that rather than glossing over the multivalent nature of places and artifacts in favor of a one-sided argument, we need to reveal the academic tensions surrounding the interpretation of artifacts to come closer to an understanding of the prehistoric past. Through this approach, it may be possible to both mirror different constructions of value and power in different social contexts, and understand how change in such value systems may have occurred.

Practically, my focus was on the settlement patterns in the plain of Kahramanmaraş. I was specifically concerned with the abandonment of large and long-lived sites of occupation in Kahramanmaraş in the second half of the 6th millennium BC. This chronologically corresponds to the earliest stages of the Halaf Ubaid transition is Northern Mesopotamia. Sites as large as Domuztepe at 20 hectare were abandoned in a gradual process, which spanned a few hundred years in the latter 6th millennium BC. Based on the evidence of its size, the site of Domuztepe has been argued to show signs of emergent complexity in the Kahramanmaraş Plain (Campbell et al. 1999). However, both the lack of site size hierarchy around the site and its abandonment at the height of its population growth have been difficult to understand. The richness in the symbolic system and the specialized production of artifacts perhaps invites the usage of the term complexity. On the other hand, this complexity cannot be confidently argued to refer to political complexity. I have observed two transitions in diachronic settlement patterning both of which corresponded to some wider social and climatic trends felt throughout the Northern sectors of the Fertile Crescent.

A shift in settlement locations has been identified in the first transition (end of the 7th-beginning of the 6th millennium BC). The settlement shift during the first transition in Kahramanmaraş indicated a social and economic process with resonances all over Northern Mesopotamia. Formerly dispersed settlement of the later 7th millennium BC was gradually replaced by a pattern that emphasized inner basin locations closer to rivers and underground water resources. Communities were constituted within these new zones of occupation during the 6th millennium BC.

The second transition in settlement occurred in later 6th millennium BC, at a time period when the Northern Mesopotamia was going through major economic and material cultural changes that eventually merged its history with that of the Southern Mesopotamia. In Kahramanmaraş, however, the effects of this change were divergent, which left the region outside the Mesopotamian sphere. In Kahramanmaraş, at this time, all the known sites with Halaf material culture were gradually abandoned before the 5th millennium BC. The settlement pattern that emerged from within this process was structurally very different to that of the early half of the 6th millennium BC in that it was more dispersed and potentially less mobile.

During the early stages of the analysis, I observed that mobility was an embedded routine of life. Although this was the case, there was an emphasis on certain locations that were targeted repeatedly for long period of times, i.e., KM 125, KM 67, KM 125). Based on this interpretation, I defined the communities around the sites of long-term emphasis. In the Kahramanmaraş region, interpretation of the settlement patterns for the 6th millennium BC was based on an understanding that, in each

community zone, there was a temporally continuous site and a few smaller and short-lived sites in approximately 2km. distance to it. Small communities, akin to tribal networks connected through kin relations, chose to repeatedly target certain locations within their community zones, while they frequently moved within that zone for a variety of purposes some of which included subsistence considerations as well as traditions surrounding social reproduction after death or other cycles of life.

In the analyses of each basin system, I suggested that the choice of locations for longer lived sites such as 97, 125, 67 may have emphasized natural boundaries, crossings and passages separating different communities geographically. Shorter lived sites extended the spatial claim while remaining within visual territories of the long-lived sites. The locations of long-lived sites may be interpreted to reflect a concern with demarcating natural boundaries through which claims on resources could be constructed. Anyone using the Kelibişler Pass, the most significant direct communication route between the SE Basin and the Central Basin, would immediately face Domuztepe as the controlling agent of the SE Basin with a clear view of the pass. Similarly, on the other end of the pass site 67 is situated on the curve of the river Aksu, immediately clear to an outsider as a marker of the northern portion of the Central Basin.

Micro-local variations in settlement patterns may represent important structuring principles related to community formation. Physical markers on the landscape can be effective in defining a community boundary; marshes and rivers can make it difficult for a community to split and pair. This type of synchronic variation has been addressed

in the modeling of three basins of Kahramanmaraş so that Domuztepe's size was understood to be a variation of the patterns observed in other community zones. All of the zones showed variations in patterning around a similar structuring principle of remaining within a closely associated territory dominated by an historically more rooted settlement. The hierarchy of places in relation to their temporal continuity, rather than size, would probably be recognizable to a number of Near Eastern communities. As I had suggested in Chapter 3, as repeated occupations built up the tell deposits, the claim of a community to a particular mosaic of resources associated with the history of the place became more legitimate.

In a closer analysis of the community zones, it is more difficult to point to a hierarchy between the social constituents of community settlements. For example, the large site of Domuztepe was made up of a number of small units or a combination of them, more or less at an equal footing with each other in their internal organization. Similarly the boundaries of the community zones are difficult to quantify in conventional understandings of territoriality and tenure. The groups may have practiced various forms of mobility and were bound via their connections to the place-community. From this perspective, the site-size growth should be related to attraction of a number of groups to the location of Domuztepe creating a spatially congruent settlement. Such attraction in decentralized social organization may be related to the integration of the local significance of place history into a widely recognized meta-narrative that connected places, people and objects during the 6th millennium BC. I suggested that the landscape was more likely to have been encountered as a mosaic of

experienced or imagined paths, locales and boundaries in which mythologies were continually recreated in material form (Barrett 1994a, Tilley 1994). The 6th millennium BC insistence on particular sites, among the potential choices, may have occurred at locations where signification of both the community and the mobile segments were most vital for the protection and maintenance of the duality.

Based on a study in Chapter 7, that explored the relationship between practices of mobility, climatic change and resource utilization, the communities of the time period were found to be dependent on a mixed economy, which combined rain-fed farming with mobile pastoralism. Climatic studies suggest that the 1st transition at the beginning of the 6th millennium BC corresponds to the start of a climatic dry phase in Northern Mesopotamia. This dry phase lasted through the millennium. Northern Mesopotamia has a rapidly changing environment in a North-South axis. Within about 200 km distance one can reach from an arid desert to some of the richest forests where rainfall can amount to 900-1000mm/year. Although we may expect that the climatic drying would have been felt all over, we may also anticipate that it was perhaps felt more so in marginal zones closer to the 200mm/year isohyet. Investigations in Balikh river valley clearly show the negative change in settlement from the northerly sectors to the southerly ones closer to the arid desert in this marginal zone. Difference in geographical conditions may have induced various economic and social adaptations within the Northern Fertile Crescent, although the ceramics and material culture may give an image of "cultural unity" of Halaf during the 6th millennium BC.

Whereas the climatic studies suggested that the 6th millennium BC witnessed a dry episode, the severity of the climatic dry phase that prevailed throughout the 6th millennium is open to debate for Kahramanmaraş. If we assume that the dry climate (in relation to its severity) brought a choice in exploitation of resources, then the choice in Kahramanmaraş was perhaps not a dramatic one that necessitated intensive techniques of farming. Rather a choice for mixed economy that combined non-intensive/rainfed farming together with a pastoral economy of small and large herds, possibly at household scale, was more suitable for the groups of Kahramanmaraş. Furthermore, each of the communities living in resource-wise different basin systems may have given different emphasis to the individual constituents of the mixed economy. For example, one may suspect a more mobile economy emphasizing pastoral economy and potentially a degree of hunting-gathering in the Northern Basin, for the Central Basin there may have been a more balanced economy.

The intensification on the animal products was an important development during the 6th millennium BC. Intensification and notions of investment associated thereby are often related to the growth of ideas of ownership and new social organization that emphasizes place focus. The pastoral economy, however, requires frequent movement and does not necessarily explain the long-term focus observed in certain locations of the 6th millennium BC. For a better understanding of the major investigation of this study, namely the temporal continuity and spatial congruity of settlements, I have dealt with the complementary facet of the mixed economy, i.e. farming. Farming is associated with place focus. As its importance grows in a mixed economy, we may expect that the

place focus will be higher. An increase in the relative percentages of farming in mixed economy may initiate gradual adoption of intensive techniques. It is, however, between values reproduced within traditions and belief systems and environmental influences that the decisions are usually made. Under some circumstances, intensification may not result in more complex social organization within the community. Thus, although place focus may be maintained for long periods of time, the group size and composition can be unstable and prone to dispersal at times of stress.

The dispersal of populations during the process of abandonment (second transition) in Kahramanmaraş was gradual and within the existing traditions of mobility that prevailed throughout the 6th millennium. The second transition in Kahramanmaraş is chronologically contemporaneous with the Halaf-Ubaid Transition in Northern Mesopotamia. For the Northern Mesopotamian case, it was argued that the transition is related to adoption of the "Ubaid" style intensive farming techniques in the Halaf contexts. Such a proposal may hold for Northern Mesopotamia, but it may be oversimplified for Kahramanmaraş. In Kahramanmaraş, where we are able to observe the initial stages of a transition associated with the Halaf-Ubaid Transition in Mesopotamia, it is impossible to see the clear-cut differences in subsistence and society. In Kahramanmaraş, the factors effecting the fissioning of populations from dominating community zones during the second transition was probably not related to a forceful and fast adoption of intensive agricultural techniques, although this may have developed to be the case in a few hundred years.

Incorporation in dry conditions may be responsible from development of a rich symbolic repertoire in Northern Iraq. However, there was probably a much deeply established recognition of certain elements of the symbolic repertoire, which ultimately made a certain style of ceramics and material culture so successful throughout the Northern Fertile Crescent in a mosaic of cultural contexts. We may suspect that simultaneous changes in settlement and material culture reflect the development and decline of a meta-narrative both with elements recognizable to cross-cultural contexts and with elements recomposed in local contexts. The meta-narrative had some elements of the Neolithic history, which gained a particular popularity during the 6th millennium BC as an incorporating agent in societies dependent on mixed economic practices. Possibly, as emphasis grew on farming during the 6th millennium BC, a growth in place focus along with a growth in symbolic complexity may be suggested. Whereas we may suggest that this meta-narrative primarily functioned to incorporate local communities, it also integrated them to a larger network of place-communities over Northern Mesopotamia whose existence were known but probably never felt this close.

The particular nature of enrichment in symbolic complexity came to an end after the Halaf-Ubaid Transition and was replaced by a symbolic complexity of different nature that perhaps emphasized more individualistic inscription, such as increase in variety of sealing practices. Increasing importance of farming and ideas related to ownership were perhaps attractive to the decentralized groups. As the connections forged by the meta-narratives of the 6th millennium gradually gave way to new ones, dispersal of decentralized groups was more perceivable.

A re-phrasing of the Halaf Question:

Were Halaf ceramics and material culture in general first produced by people of particular geographical area at a particular moment in history?

Or does the name Halaf hide the shaping influence of the deeply rooted local traditions of long periods of cultural transmission?

How, when, where, why a certain symbolic repertoire was ultimately preserved in material culture and transmitted over generations?

In a conventional understanding of the ceramics, the development of the painted pottery traditions that took over greater Northern Mesopotamia may have started in a small area of Northern Iraq (Hassuna-Samarra). In this marginal zone we may expect different economic and social adaptations than that of Kahramanmaraş. The new techniques of symbolic communication through material culture may have resolved some of the communicative needs of the communities. Incorporating aspects of material cultural communication may have been attractive to a variety of communities over Northern Mesopotamia. Thus, in a short period of time, specifically the communities of marginal zones adopted the symbolic repertoire of material culture during a time, which corresponds to the beginning of the climatic drying.

In Kahramanmaraş, outside of Mesopotamia, the effects of the Mesopotamian traditions were perhaps felt since the beginning as a few Samarran sherds on the site of Domuztepe suggests. However, a clear cut evidence of Early Halaf sequence has not been demonstrated in the region. As the excavation of Domuztepe continues, we may uncover contexts that may shed light on when and how Halaf ceramics became part of

the local assemblages. On the other hand, it may be that Halaf ceramics became part of the local assemblages only in the late Halaf as it was the case for the "Halaf influenced" regions, such as the Qoueiq (Mellaart 1981), Amuq (Braidwood and Braidwood 1960) and Mersin (Garstang 1953).

Following development of a highly skilled craft production and symbolic enrichment in ceramic painting during the Late Halaf, ceramic styles known from the Southern Ubaid contexts started appearing in the assemblages of Domuztepe's A3, KM 67 and KM 96. This time period in Kahramanmaraş corresponds to the early stages of the Halaf –Ubaid Transitional Period in Northern Mesopotamia. In Northern Mesopotamia, the ceramics and much of the material cultural record have lost their rich symbolism by the end of this transitional period. Whereas the Ubaid ceramics, during this transitional period, influenced both the peripheral areas such as Kahramanmaraş and "the core" in Northern Mesopotamia, it eventually resulted in differential paths in the two areas. Kahramanmaraş appears to have reintegrated into a Levantine/Northeast Anatolian axis with no evidence of the Uruk influence (Campbell et al. 1999), whereas Northern Mesopotamia witnessed a major Uruk spread.

As the Halaf material culture expanded to its maximum territories over the Northern Fertile Crescent, sites such as Domuztepe, Kazane and Takyan grew to large sizes. These locations apparently acted as attractors for various kinds of social interaction in an ever growing interaction sphere. Yoffee (1993) suggested that the imagery on Halaf ceramics indicates a developed symbolic pool (not necessarily meaning) recognized by communities within the same interaction sphere. Most recently,

following Cauvin's argument (2000) for the symbolic foundations of the Neolithic Revolution in the Near East, one may suggest that certain elements of the early Neolithic symbolism are present in the material culture of the Halaf Period, such as bucrania. With the introduction of painted ceramics in the west, we may be witnessing a process that carried a deeply historical and widely recognized global message of Neolithic history to the variant cultural contexts of local communities that inhabited the late Neolithic landscapes of the 6th millennium BC. Through this context, local communities may have found themselves in a process of social positioning which on the one hand organized the local community in traditional ways, and on the other hand situated them within larger networks whose existence were always known but were never expressed so clearly.

Chapman (2000) noted that the attraction to large sites may be related to the value of the place in such mythic structures. In the way he describes tells, we may imagine a landscape of settlement that was shaped by mythic paths and locales, i.e. histories that situate individuals and places within a conceptual landscape akin to that of the Australian Aboriginal "Dreamtime" (Tacon 1994, Morphy 1995). The wide spread distribution of symbolic elements represented in ceramics may be a product of an effort to link and locate local inhabitations and inhabitants within a larger ideology. This ideology may have regulated community relations by sending messages about gender and age roles, ancestral connections and social links to landscape (Hoskins 1998). At a local level, contexts such as eating may have functioned to bring segmented community

together around a meaningful community ethos by simultaneously constructing rules of membership and moral obligations of sharing.

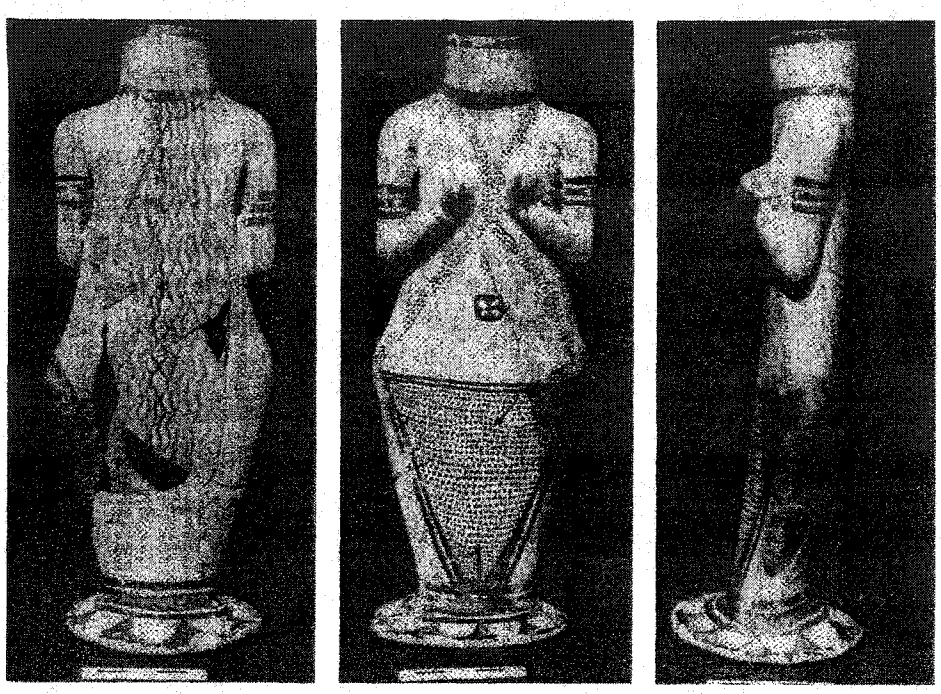


Fig. 9.1. Halaf Period Anthropomorphic vessel from Yarım Tepe (from Yoffee and Clark 1993), some of the decorative elements observed on the vessel were frequently used on stamp seals and ceramics of the Halaf material culture.

During the dry phase, new techniques of water exploitation may have encouraged different settlement strategies. The 1st transition (end of the 7th-beginning of the 6th mill. BC) in Kahramanmarash may be related to such a change. A need for pooling of resources in communal contexts may have brought together otherwise spatially and economically decentralized kin groups. A variety of artifacts may have been employed to facilitate the social organization. Thus, an increase in the symbolic repertoire and artifacts may have mediated the communication of differences as well as similarities in contexts of agglomeration. Certain sites which were important both in local history and in a regionally emerging social context may have attracted repeated

occupation and population movement. It should not be surprising to find more elaborate and varied material culture at these sites as such attraction would ultimately result in increased symbolic enrichment that is necessary to order the communication of ever growing population.

It would be particularly at these sites that capacities of organizational complexity in an incorporating practice could be observed. As the lengthy occupation of at least half a millennia at Domuztepe suggests, these settlements resisted various social and economic stresses imposed by the population growth through routine employment of ritualization. Social organization mediated through ritualization emphasized the incorporating practice and did not allow institutionalization of hierarchies at individual levels. By the same token, the populations living on large sites located in climatically less risky zones, such as Domuztepe may have continued to be made up of social groups relatively independent in their subsistence production. This independence could have given them a degree of freedom to choose whether to move or stay as the conditions suit them. Specifically with the new possibilities of perhaps land ownership, abandonment may have even been seen as a better decision. As the linking canvas of life was changing, such decisions were probably perceived more plausible than they ever were before. Disappearance of relationships between the burial and settlement is also a supporting clue about the changing place values during the latter part of the 6^{th} millennium BC in Northern Mesopotamia. Although we may not be able to support an argument for the adoption for intensive agricultural techniques during the second

transition in Kahramanmarash, we may suspect a shift in place values that may have encouraged the dispersal from the community zones.

Successful linking of some locations such as Domuztepe to the larger symbolic network of Northern Mesopotamia may have been influential in the size growth. Various groups may have been attracted to such locations seeking for social alliances that would link them to the renowned place communities. Within this process, certain competitive trends may have developed to regulate the status differences between various groups or individuals. Objects such as obsidian, stamp seals and even ceramics may be indicative of increasingly complex contexts where status differences were structured.

One should be reluctant to interpret the large site phenomenon during this period of the Halaf material cultural spread as an indicator of emergent complexity in context of political centralization. The increase in symbolic communication during the 6^{th} millennium is a reflection of a different conceptual field functioning at growing complexity (fig.9.2), as opposed to an evolutionary one suggested by excavators previously (see Campbell et al. 1999). I had suggested that the growth of this complexity can be understood as an attempt to close the gap between practices of increased reliance on sedentism and agriculture and historically rooted concepts and traditions of social reproduction.

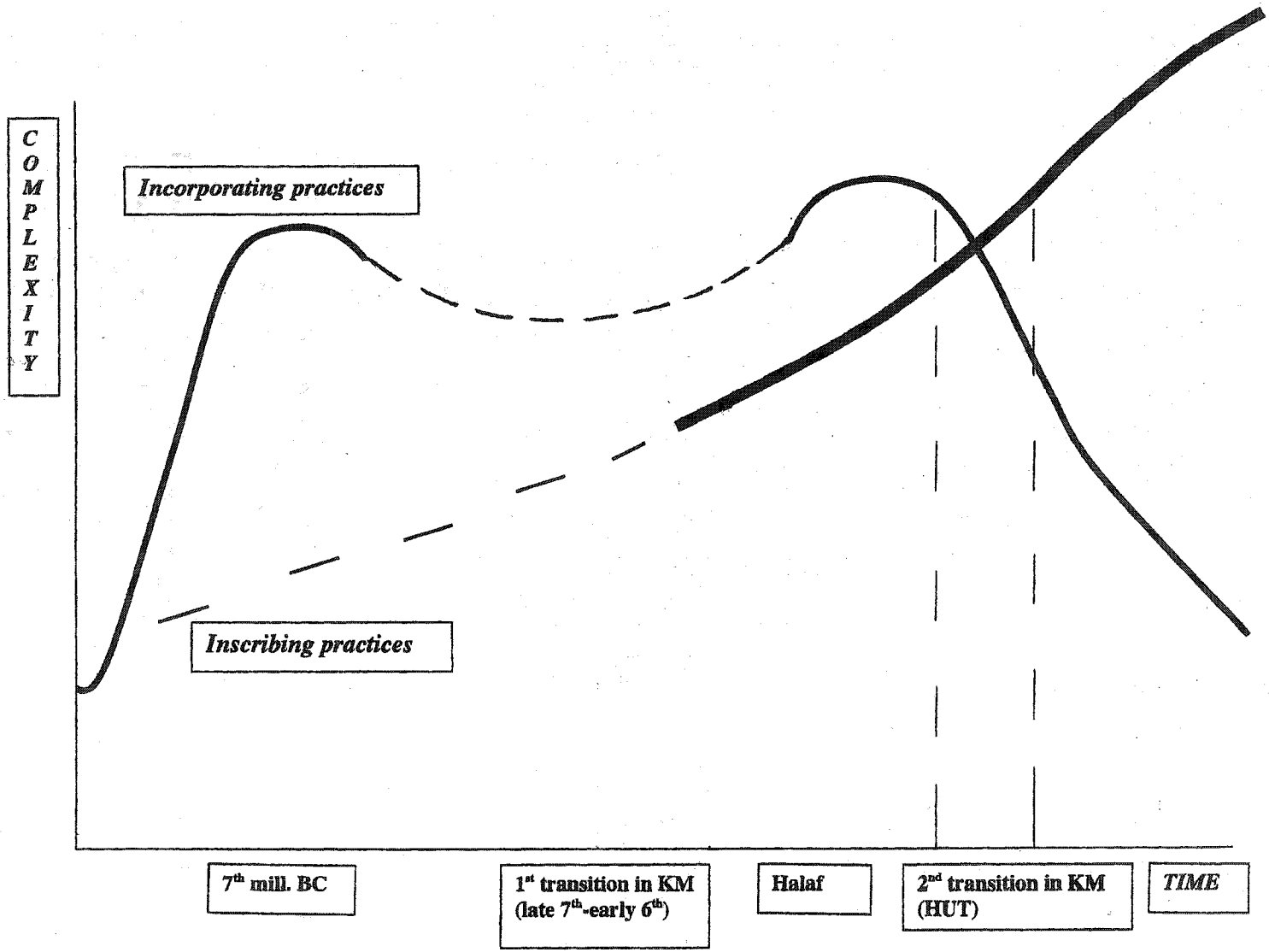


Fig. 9.2 The dual face of complexity in the prehistoric Northern Mesopotamia. Rise and Decline of different practices through time

A duality is reflected in the settlement patterns of the 6th millennium BC. One side of this duality indicates permanence in the duration of occupation at long-lived sites giving an image of stability and corporate unit. Other side of the duality represents the short term, shifting occupations giving an image of a volatile and segmented community. Such a duality and conflict can be argued to exist in the material practice of seals for example as argued in Chapter 2. A tension between multiple understandings of community can be suggested based on the dual nature of relationships between objects and persons during the 6th millennium BC. Firstly, there is the concept of community that is primarily local and founded on the traditional rules of membership (kinship?) in ancestral place-community. Secondly, there is a concept of community that is globally situated within a mythic network of place-communities sharing similar practices and symbols.

Tells emerge as markers of communities with long history of occupation in a particular location. In a landscape of mobility and small size communities, representation of attachment to a particular locale may have been far more significant than we may think. For the case of the Greek Neolithic tells, Perles (2001) has suggested that as archaeologists we should be aware of the fact that in settlement pattern studies of a tell landscape we are actually writing history of long-lived sites. There are many clues that the Halaf Period landscapes had a much more volatile existence than we observe today. In this respect, long-lived sites should have been regarded as important locations within this volatile existence.

In Kahramanmaraş, intensive agricultural techniques may not have been employed during the 6th millennium BC, although its concepts slowly filtrated into the region. As these concepts ordered people's social relationships to each other, perhaps some important aspects of value and structuring principles of the connection between the material world and the people changed.

The Past in Prehistory:

Repetitive acts of occupation in the dominating locations, such as the sites of KM 97, KM 125 and KM 67, established a continuity that was vital for economic and social organization of community as well as for an individual understanding of history. By the very nature of this tradition, specific spatial and temporal references to the past, such as a communal burial were short-lived. The residential space was continuously appropriated to preserve an image of communal continuity instead of articulation of individual or group histories. Recording of history (inscription) was left to the representation in accumulating debris itself, while the past was continuously rehashed and forgotten in a few generations time (incorporation). History inscribed in residential space became a myth, a parcel of oral history to be communicated to future generations. By the same token, the continuous appropriation of restricted space indicates that the memory of events were dependent on the remembrance forged by the structured deposition of the tell. The past was not remembered as a string of individual events, but rather as an amorphous mythical narrative that was embodied in the deposit of the settlement itself. Although perhaps the concern was to keep the volatile community

together, in time the growing tell deposit in certain locations became a structuring structure, dividing and uniting people through the hierarchies imposed by its presence.

Based on this effort to maintain material embodiment of place-community during the 6th millennium BC in Kahramanmaraş, I also suggested that long history of occupation in restricted space was a type of inscription that took place in an incorporating context (Küchler 1987). Segmented place community was incorporated in places of this kind and received their share of resources through continuous demonstration of ties to the community. Symbolic enrichment in material culture possibly grew with this process as the rules of sharing at the community level required more complex forms of symbolic communication in contexts of spatial aggregation.

Based on the ideas triggered by the surface collection of Domuztepe and the regional analysis, I investigated the practices of mobility in terms of range of geographical focus and repeated targeting. I modeled the variations in synchronic and diachronic perspectives to come to a conclusion that the 6th millennium settlement in Kahramanmaraş can be a variation of the late 7th millennium settlement practices, both of which emphasize a long-term focus in some locations in the presence of various forms of mobility. I argued that in the repeated targeting of certain locations during the late and post Neolithic, we see a practice, which emphasized protection of biographical continuity and efforts to form a link to a deeper history of presence in such locations.

To come closer to the connections between the material world and people for the 6th millennium, we may view tells, specifically the long-lived sites as artifacts with representation of permanence in the growing tell deposit that were continuously

appropriated with ephemeral structures in an attempt to preserve and impose their meaning to the future. Frequent abandonment, burning of houses, keeping short term memorials for burials that in time mix with residential deposits in the tell space can be categorized as acts of forgetting whether the intention was to forget or not. Such acts foster a vision toward now and the future while the past becomes part of memory and myth. The primary emphasis was on incorporating the local community during the 6th millennium. This incorporation was inscribed on the landscape in the form of tell. Such an inscription can be understood and articulated in its relation to burial practice as in time after the Halaf/Ubaid period a shift may have precipitated from incorporating toward inscribing practices. Burial practices after the Halaf Period in Northern Mesopotamia, for example have a much different spatial configuration in relation to settlements as discussed previously in that, mapping and preserving the relations of individual dead becomes a main concern in the practice of burial. Understanding of history, biography, past, present and future was articulated in very different ways in this shift. Tells at this time should have gained new meanings even though the form may appear unchanged. Although there is no evidence from Kahramanmaraş, I believe the 2nd transition in the region was induced by parallel influences that also affected Northern Mesopotamia.

Tells as permanently situated artifacts on the landscape continuously forge different links between place and people. Conventionally, the archaeological research has been concerned with understanding this link from a modern perspective. However, the value of tells of the post-Neolithic were not primarily in their exploitative

relationships to landscape or their size. Rather, they were focal points of community formation during the 6th millennium; places that needed to be maintained as successive linking of segmentive community to each other and a shared history.

For the 6th millennium social reproduction, it was the existence of living and their continuous efforts to transmit the traditions in the repeatedly occupied tells that conveyed the most potent message to future generations, and instructed social formation. Tell became the embodiment of the group history and identity of the place-community for the 6th millennium society. Tells may have become a new and distinctive form of material culture in relation to other types of occupation. This new form of material culture would be interpreted across generations in a way that would not be possible with portable artifacts. These sites may have become the symbolic center of the landscape for groups of people dispersed on landscape. Perhaps long lived tells were regarded as the ancestral homes of communities who were bound to one another through their connections with places of this kind.

Increased interaction on the one hand and tension between traditional ideas and incorporating social practices on the other hand, may have created the highly structured and articulated symbolic behavior during the 6th millennium BC. For example, imagery in ceramics may have invoked mythic concepts rooted in the past, an adherence to tradition and past while they allowed mediation of new social practices and their concepts to be reconfigured into an image of continuity. The first widespread appearance of painted ceramics may be related to myths of established sedentary-agricultural communities of Mesopotamia. Ceramics were a successful context to bring

segmented communities together. Yet, there were other practices, specifically burial, that structured the community and its segments in profoundly different ways.

In many respects, the nature of community formation and landscape structuring is related to the importance given to mortuary practice. Although the mortuary practices of the Neolithic Period have been regularly highlighted in the literature, the tradition may be rooted in the hunting-gathering contexts and may indicate close observation of genealogical relationships in societies structured via kinship relations. A study of mortuary practice also gives us an understanding of how segments negotiated resources, and how in the process created a landscape upon which future generations built a different one. The 6th millennium communities had a particular understanding of the past. Eventual breakdown of this understanding may be seen in the separation of burial spaces or creation of spatially distinct ritual structures within or out of the residential areas. These structures would withstand the process of decay or danger of deposition in time thus separating and articulating the inscribing (growth of deposit:linear) and incorporating nature (burial and mobility: cyclical) of a Neolithic settlement. Very different understandings emerged by the Late Chalcolithic along with different traditions that linked persons and things. Although data is very scattered, in many sectors of Mesopotamia the practice of living with the dead disappears from daily life of residence by the late Chalcolithic, another parallel trend following introduction of concepts of intensive agriculture and disappearance of material cultural legacy of the Neolithic.

In this respect, the abandonment of 6th millennium BC sites in Kahramanmaraş may reflect dissolution of a connecting narrative of the past, present and future, which no longer brought people together and construct communities in the same manner. During the construction of a new narrative within which new identities could be forged, some of the old occupations were abandoned. In a process of forgetting, the information stored in the abandoned tells; houses, burials and many other places marked by events in the life of a community may have become part of a mythical past that was gradually molded into the new narratives. Tells themselves subsequently became part of a material culture for many future generations to gaze at, in an effort to link up to a grand narrative of continuity within which insignificant and ordinary individual experiences could gain power and become meaningful.

Appendix A

KM Survey Site Catalogue

(in order of site numbers, only sites recorded with Neolithic to Late Chalcolithic elements, lithic component has been analyzed by Dr. Elizabeth Healey)

KM 1, Türkoğlu-Taştepe

Hill itself=200m in diameter, but site or sites, if they exist are very scattered and thin. Area is unknown.

Central Zone. Map N37b1, 11.1E-40.5N. Decimal Deg. N37.390 E36.866. At the eastern edge of the mountain complex (Amanus) running in a south-north axis making the natural western border of the Gavur Lake Basin. Turkoğlu town is to the west. It is a natural rock outcrop with boulders on the Adana road; in '92 a number of tools were found. Artifacts appear to have been turned up when furrows for the trees were plowed. Hill itself does not appear to be source of the flints that were worked, although the site (KM 2, Cakmak Tepe), few hundred meters to the north-east is a flint source. On Adana Rd. park gate. Wheat, cotton, corn. Aretisian well irrigation, drainage canal.

Lithic site. Pre-Neolithic, Epipaleolithic (?), LBA, Iron.

KM 3, Korucuhöyüğü

Height-22 m. Area-1.23 ha.

Central Zone, Map N37b1, 10.75E-39.1N. Decimal Deg. N37.378 E36.863. Approximately 1,5 km to the south of KM 1 and 2km to south east of Turköğlü town, located on the left of the Adana-Hatay road. Factory-some kind of metal works. Cuts SW edge south of KM 1&2, between railway and Adana road. Circular mound badly cut by factory. Original extent much larger.

6th millennium general ceramics (Halaf-Ubaid spectrum), EBA, LBA, Iron, Hellenistic? Medieval?.

KM 4, Eşekhamza

Height-9 m. Area- .79 ha.

Central Zone. Decimal Deg. N37.379 E36.894. Approximately 1km to the w-Nw of the Golluhöyük köyü, on the southern side of the railroad. On the artesian system. S of rail line surrounded by canal. Oval mound higher than appears by terrace area on three sides. Corn, cotton. Gölü H. visible to E, Koruce to W. Recent campsite on top.

General 6th millennium (Halaf-Ubaid). MBA, LBA, Iron, Hellenistic? Medieval?.

KM 6, Esmerler

Height-0 m. Area- .22 ha.

Central Zone, 37,5N-17,5E. Decimal Deg. N37.367 E36.937. A few hundred meters east of Cobantepe, Esmeler. KM 8 and 9 are approximately 1.5km to the south. Ozbek (10) 2km to the east. On the effective underground water line. Site in cotton field at foot of natural hill.

Neolithic, Late Chalcolithic pottery. Medieval?

KM 8, Ömerağa höyük

Height-9 m. Area-unknown

Central Zone. Map 37-B2. 36.2N-17.2E. Decimal Deg. N37.353 E36.937. Located at the northern edge of the hill complex to the west of Tut mountain, a natural southern border of the central basin. Springs are located on the hill behind and flow through the sites KM 8 and KM 9. KM 9 is a few hundred meters to the east. Possible access to DT is through Kelibisler pass. Stony mound surrounded by plowed fields.

A good sample of Neolithic ceramics and lithics including 7th millennium burnished wares, red washes and incised types. Potentially earlier than 67 and 70 assemblage. Also includes, arrowheads, Amuq points, obsidian side blow blade flake (typical Neolithic). EBA, Medieval?

KM 9, Ağakahir

Height-0 m. Area-unknown.

Central Zone. 36.2N-17.8E. Decimal Deg. N37.351 E36.944. Similar conditions as 8. Access to Neolithic sites in the Emirler vicinity could have been through the hill or through Cakmak where 45 is located. SE to KM10. Wheat field to south. Spring, sugar beet fields. Low mound with unused irrigation feature. Branch of canal on N&E sides. Oval mound with much plowing possibly Hellenistic.

7th millennium burnished , impressed, red washed vegetable tempered coarse ceramics. Potentially closer to the assemblage of 70. Hellenistic? Medieval?

KM 10, Özbek Karahasan

Height-40 m. Area-2 ha.

Central Zone. 37.8N-19.5E. Decimal Deg. N37.367 E36.961. On the underground water line. (in cluster, visibility to other sites and general landscape markers, access to resources, routeways etc.)

General Ubaid and Late Chalcolithic pottery. EBA, LBA, Iron, Hellenistic?

KM 12, Mezarlık Höyük

Height-20-30 m. Area-1.54 ha.

Central Zone. 39.5N 13.2E. Decimal Deg. N37.337 E36.891. On the faultline (springs?) at the North eastern edge of the Gavur Lake Marsh. At the north western edge of the same hill complex of 8 and 9. Visibilty emphasizes the northern portion of the Western Basin Hacıbebek cemetery site. In the middle of rich irrigated corn fields at the edge of the wadi. Very high mound surrounded by low house mounds that are dissected by the road. The very top of the mound serves as cemetery for H. Bebek.

General Ubaid ceramics. EBA, LBA.

KM 16, Sıçanlıhöyük

Height-8 m. Area-1.54 ha.

Central Zone. Map B4. 38.1N 8.8E. At the tip of a small channel which joins the drainage of Gavur around Turkoglu. Faultline runs SSW- NNE. Aydınlıevler village just W of cotton fields, wheat, single tree on top. Hills to W. Possibly another site which is backup against a natural hill.

Late Chalcolithic pottery. Hellenistic?

KM 17, Minehöyük

Height-0 m. Area-4 ha.

Central Zone. Map CB-B4. 29.8N 10.7E. Decimal Deg. N37.293 E36.865. On the hill faultline, very edge of the Gavur Marsh and Buyuk Gol. Mazarlık to NE, Adana Rd. to E. Fields of sugar beet salad reed pockets; backed up against hills.

Late Chalcolithic pottery and lithics. Two large flints parallel to DT upper layers. EBA, MBA, LBA, Iron, Hellenistic? Medieval?

KM 21, Sivrimine Tepe

Height-22-26 m. Area-2.1 ha.

Central Zone. 34.3N 6.6E. Decimal Deg. N37.332 E36.815. Spring is located to the west of the site. Two mounds one small high citadel linked by a saddle with low mound to NE. Adjacent to Adana Rd. Between railroad and canal irrigated fields along canal.

Faint mid 6th millennium presence in ceramics: orange painted and general Halaf material. Late Neolithic to Halaf lithics are comparable to DT. Late Chalcolithic ceramic and lithics are better represented: wide blades, burin. EBA, LBA, Iron, Hellenistic? Medieval?

KM 28, Orta H. Çakallı Hasanağa

Height-12 m. Area-1.82 ha.

Central Zone. Map B2, 46.7N 13.1E. Decimal Deg. N37.446 E 36.887. Springs and flint sources. Good place for possible earlier occupation. Off Adana road. Cotton, sugar beet fields. Steep mound on road terraces to S,N, and W; east steep with large brick wall. Height may be due to a fort on top.

Late Chalcolithic pottery. EBA, Hellenistic? Medieval?

KM 36, Katriye Höyüğü

Height-unknown Area-unknown

Central Zone 36.0N 13.4E. Decimal Deg. N37.352 E36.895. Motopump. Hacibebek is a couple of km to the east, Cobantepe is approximately 4 km to the northeast. Flattened site S of main canal crossing; field recently plowed.

General Ubaid pottery. EBA, Hellenistic?

KM 39

Height-unknown Area-unknown

Central Zone Decimal Deg. N37.294 E36.881. On the channel of Koca Dere running through Balikalan. Spring is very close. Classic Neolithc location where sites are located within somehow closed systems at the edge of hill and basins through which small channels create a basin before they join in with larger rivers. Sites make use of a wide range of environments within a small distance. Springs are emphasized thus perhaps underground systems are not in use yet. Emirler valley and the Neolithic sites of this area are to the east and naturally sparated by the Akpinar Mevki serpantine hill. Basalt (karatas Tepe) is to the south.

Amuq type Late Neolithic lithics, Late Chalcolithic ceramics. Arrowhead might be similar to KM 8 in date. Hellenistic? Medieval?

KM 40, Emirler

Height-24 m. Area-2.01 ha.

Southern Zone. 29.1N 18.5E. Decimal Deg. N37.289 E36.952. Central to the routes connecting 8-9 on the north, Eastern basin on the east, Sakca gozu on the south, Gavur Lake Basin on the west. Basin is isolated and many natural routes coincide at Emirler. Oval citadel mound, modern cemetery at food. In pocket valley by alluvial fan. Barren hillside to west.

Late Neolithic to Chalco lithics. Late Chacolithic pottery. EBA, LBA, Iron, Hellenistic?

KM 41, Altınhöyük

Height-8 m. Area- .5 ha.

Southern Zone. 27.7N 16.5E. Decimal Deg. N37.276 E36.930. On the pass from Emirler Basin to the Gavur Lake Basin. The route follows: 8-9 to 45 to 40 to 41. Spring at foot, middle of plowed fields. Round mound with store platform on top-possibly piled by shepherds.

Late Chalcolithic general and an Uruk like droopy spout but fabric is too thin and fine. MBA, LBA, Iron, Hellenistic? Medieval?

KM 43

Height-4 m. Area-1.77 ha.

Central Zone. 35.3N 21.4E. Decimal Deg. N37.344 E36.983. Garden, ponds left by chrome mine; spring, cemetery of village. Rolling hills, wadi.

Paleolithic site. Hellenistic?

KM 45

Height-11 m. Area- .57 ha.

Southern Zone. 31.5N 20.1E. Decimal Deg. N37.311 E36.969. In the Cakmak mahallesi. More in the system of Emirler valley but on the pass connecting central basin and Emirler Basin. A few channels running perhaps weakly. In valley

with spring and gardern at NE foot. Round mound with huge cut in east side and fielded wall down the center.

Bichrome and orange surface Late Halaf ceramics. EBA, MBA, LBA, Iron, Hellenistic?

KM 49, Akkahir

Height-14 m. Area- .5 ha.

Southern Zone. 25.9N 20.1E. Decimal Deg. N37.260 E36.972. On the pass connecting southern part of the east basin to Emirler and Gavur via KM 95 and 96 on the east and 51 41 39 to the west. Northwest edge of Sehit tepe hill complex located within the Emirler Basin. Single tree with spring, cornfields, edge of barren hills and rocky outcrops. Cotton fields to N and NE. Stony mound much spread out over fields. Probably set into hillside on south.

General Ubaid and possible Chalcolithic pottery. Neolithic lithics. Hellenistic? Medieval?

KM 50, Biber höyük/Incirli

Height-unknown Area-unknown

Southern Zone. 25.6N 18.9E. Decimal Deg. N37.260 E36.955. Only a km to the west- south west of 49. Modern town of Incirli. Neolithic flint scatter was recorded between Emirler and Incirli.

Undiagnostic prehistoric lithics. Some Neolithic pottery. Iron, Hellenistic? Medieval?

KM 51

Height-4 m. Area- .2 ha.

Southern Zone. 27.5N 19.4E. Decimal Deg. N37.271 E36.962. In Emirler Basin. Within the site cluster of 49-50-51. Off road between Inciler and Emirler. Oval mound with stones on top.

Late Chalcolithic pottery. MBA, LBA, Iron, Hellenistic?

KM 55, Danışman

Height-natural hill, mound height unknown Area-107 ha.

Central Zone. 43.5N 13.6E. Decimal Deg. N37.419 E36.892. Location controls the valley communication between the south and the North. Gavur drainage meets Aksu to the east of Danişmantepe. Huge site but extensive occupation on natural hill; depth of deposit and periods of occupation difficult to estimate. Fortress outlines on top, terraced occupations down the slopes.

Chalcolithic lithics? EBA ceramics, Hellenistic?

KM 56, Sıçan höyük

Height-4 m. Area- .5 ha.

Central Zone. 42.4N 19.1E. Decimal Deg. N37.408 E36.899. Approximately 1 km to the south of 55 on the southern side of the Gavur drainage river. Covered by

cotton fields and cement survey point at N end. Low oval mound; many bones on north slope. Recent grave robbing may have churned up an early site.

General Ubaid ceramics with greenish tint, Late Chalcolithic pottery. Uruk shaped internal rim may appear in Late Chalcolithic contexts. Hellenistic? Medieval?

KM 57, Cüce höyük

Height-3 m. Area- .13 ha.

Central Zone. Decimal Deg. N37.390 E36.906. 2 km south of 56. On the possible artesian border. Large canal. Camrak NE .5 km. Round low mound; top used recently but relatively undisturbed.

Late Chalcolithic pottery. MBA, LBA, Iron, Hellenistic?

KM 63, Geçit Höyük

Height-28 m. Area-1.4 ha.

Central Zone. 40.2N 22.8E. Decimal Deg. N37.391 E36.998. South of Ekberoglu Serpentine raise, on the ground water border. On the northern coast of the Aksu. 1,5km southeast of 72, 3.5 km southeast of 69. On the eastern side of the central basin closer to the Kopruagzi. Burials on top; road on west. Steep sided mound with flat top sloping up slightly to east, road on east side.

General Ubaid pottery. EBA, MBA, LBA, Iron, Hellenistic? Medieval?

KM 67, Yorganhöyük

Height-6 m. Area-1.8 ha.

Central Zone, 41.8N 19.4E. Decimal Deg. N37.403 E36.959. 1.5km southwest of 69, on the edge of Aksu. A possible cross over Aksu on this location. Road from Camuzoğlu village. Cement walled garden with pine trees. Three sides surrounded by fields. Oval mound.

Late 7th millennium burnished ceramics appear later than 8 and 70 assemblages. Also present are orange painted related ceramics stylistically related to Ubaid. The surface occupation appears to be immediately Post Domuztepe. This is a high mound and potentially have successive phases of occupation in between the late Neolithic and Post Domuztepe. Lithics belong to Late Neolithic-Halaf spectrum, very similar to Domuztepe. Hellenistic? Medieval?

KM 68, Bozhöyük

Height-37 m. Area-2 ha.

Central Zone. Decimal Deg. N37.430 E36.977. In between the earlier Neolithic sites of 67 and 70 on the northern portion of the central basin. A small channel coming up from the springs around 70 runs close to the site which eventually joins Aksu just a few km south east of Danisman. Small house at food near Colakalı village. Corn fields. Steep sided flat-topped mound.

Ubaid and Late Chalcolithic pottery. Purple tinted dark paint on the Ubaid ceramics is reminiscent of 67. Also some pattern burnished ceramics. EBA, MBA, LBA, Hellenistic? Medieval?

KM 69, Kuyulu höyük

Height-2 m. Area- .13 ha.

Central Zone. 42.6N 20.7E. Decimal Deg. N37.412 E36.973. On the southern edge of the Karaali Tepe serpentines in the Nevruzlu village. In cornfield. Low round mound.

Some late 7th millennium burnished ceramics. Very rare painted orange and bichrome existence in an assemblage of Thick burnished, and classic Halaf sherds indicates Halaf occupation similar to Domuztepe A1 and A2 phases. Possible abandonment during A3 followed by reoccupation in later Ubaid. Classic Ubaid and other broadly Ubaid sherds indicate reoccupation in more developed Ubaid. Lithics similar to DT. Hellenistic?

KM 70, Sazlıpınar

Height-8 m. Area- .5 ha.

Central Zone. 44.6N 23.8E. Decimal Deg. N37.438 E37.006. 1km north-northeast of 71. Near Sivricehöyük village. Located by a spring. An interesting rock formation a few meters to the northeast of site marks the location. Partly in cotton and corn fields.

Mid to late 7th millennium ceramics. More incised and impressed than burnished similar to Amuq B. Burnished types appear ancestral to 67 but later than 8, some material appear similar to 125. Some general 6th millennium sherds on the surface are also present. Late Chalcolithic. Medieval?

KM 71, Sivrice höyük

Height-14 m. Area- .13 ha.

Central Zone. 44.4N 23.2E. Decimal Deg. N37.428 E37.002. A very pointed site located between 68 and 70 on the edge of a serpentine hill complex. Near the village of same name. Canal at foot. High, small mound with central hump, possibly small fort or outpost.

Some general 6th millennium sherds resembling Ubaid. Late Chalcolithic. EBA, Hellenistic?

KM 72, Küllüce höyük

Height-4 m. Area- .16 ha.

Central Zone. 41.3N 21.7E. Decimal Deg. N37.401 E36.982. Approximately 1,5km southeast of 69, halfway between 69 and 63. Canal about 300 m. east. In middle of cucumber fields. Middle part just leveled off.

Late Chalcolithic pottery. Hellenistic? Medieval?

KM 80, Osmandede

Height-27 m. Area-2.6 ha.

Southern Zone, Map N38-A4. 32.9N 31.5E. Decimal Deg. N37.326 E37.098. 5 to 6 km east of Domuztepe located at the northeastern side of the Osmandede village. Located in the middle of the basin where northern edge of the marsh meets

the slightly higher mid basin. Karacay spring is approximately 3km NNE. It may have run closer to the site during its prehistoric occupation. The general location is marked as a good area for underground utilization. In village, Hanobası visible. High mound with small house on top that appears to house a weather station, the shape of the mound probably modified when it was constructed; the top was flattened.

Late Chalcolithic pottery. EBA, MBA, LBA, Iron, Hellenistic?

KM 84, Sakızhöyük

Height-unknown Area-7.07 ha.

Southern Zone. Decimal Deg. N37.284 E37.053. 2,5km east of Mazman Tepe, within the Mizmilli Marsh. Town covers site. Originally an extensive oval site. Now there is very little material and most are covered by black dust.

General Halaf pottery. MBA, Iron, Medieval?

KM 87, Hamizkanlı höyüğü

Height-10 m. Area- .5 ha.

Southern Zone, Map N38-A4. 29.9N 25.9E. Big canal to N; road 400 m. to SE leads to Güllük.

General Ubaid pottery. MBA, LBA, Iron.

KM 88, Çöçelli

Height-30 m. Area-6 ha.

Southern Zone, Map N38-A4. 27.9N 33.5E. Decimal Deg. N37.282 E37.124. At the southeastern border of the Mizmili Marsh, located at the edge of one of the springs (Baglama) feeding the marsh. The modern highway to Gaziantep passes by the site. The limestone hillside behind marks a natural border to the Narlı Plain. The site's immediate surrounding is a permanent pond. Houses at foot, lots of small brick-like stone foundations eroding out. Large, oval, evenly rounded mound.

Some pattern burnished ceramics, more classical Ubaid material on the surface indicate a general 6th millennium occupation. Late Chalcolithic material has potentially few northern Uruk inturned rims. EBA, MBA, Iron, Medieval?

KM 91, Ortahöyüğü

Height-10 m. Area- .79 ha.

Southern Zone, Map N38-A4. 26.2N 31.1E. Decimal Deg. N37.266 E37.095. A similar location to 88 by the tectonic spring of Mizmili. Located on the same faultline about 3km southwest of 88, in Pınarbashı mahallesi. Agriculture backed up against hills surrounded by cotton fields near town of Pınarbashı just NE. Large cut on side, road into it, round but originally high mound.

Genaral 6th millennium potentially Late Halaf to Ubaid pottery. MBA, LBA, Iron, Hellenistic?

KM 92, Taşbiçme höyüğü

Height-15 m. Area-2.4 ha.

Southern Zone, Map N38-A4. 25.6N 28.7E. Decimal Deg. N37.260 E37.069. The third spring in the series of 88 and 91. 2km southwest of 91, Located in the Tasbicme village. At edge of village of same name, next to new superhighway. Flat-topped high conical mound; upper 10-12 meters quite steep; fortress on top built of stone. Road of sorts made on village side.

Late Neolithic and Halaf lithics, but not very clear. MBA, Hellenistic? Medieval?

KM 95, Karahöyük

Height-15-20 m. Area-6 ha.

Southern Zone, Map N38-A4. 26.4N 25.2E. Decimal Deg. N37.267 E37.029. Marks the eastern border of the Emirler (sakarat) valley. Located in the village of Karahoyuk 2km south of Mazman Tepe. At edge of hills in rich agricultural land. Rounded-top high mound, partially nibbled away by village.

Neolithic lithics. Sickle blades could be Late Neo or Halaf. EBA, Hellenistic? Medieval?

KM 96, Kızılık

Height-3 m. Area- .33 ha.

Southern Zone, Map N38-A4. 25.8N 26.3E. Decimal Deg. N37.261 E37.041. Approximately 1km SE of Karahoyuk, 2,5km west of 92. Southwestern border of the marsh limits. In 2000, more than half of the site was destroyed in one morning to open up more agricultural land. The site may not be in existence as a mound anymore. Super highway 1 km. east between Karahoyuk and Taşbicne. Low round mound in middle of fields with field wall on top, partly plowed, partly under corn.

Post Domuztepe bichromes in a more developed Ubaid assemblage. Fuller classic Ubaid existence that does not occur at 67. Late Chalcolithic pottery. One obsidian piece, scrapers (not good), big core but not properly worked, blades are not big. Assemblage does not seem to be similar to DT. Hellenistic? Medieval?

KM 97, Domuztepe

Height-15 m. Area-20 ha.

Southern Zone, Map N38-A4. 32.7N 26.0E. Decimal Deg. N37.321 E37.035. Northern tip of the Mizmilli Marsh. The site is known to be surrounded by marshes as late as 1970's. The Kelibisler Pass appears to be a route connecting the site to the central basin. Tut Mountain is to immediately to the west where some Roman graves have been recorded. Before the drainage work, there would have been a small channel running on the western side of the site would join Aksu 2km up north. Evidence of fluvial activity on a drainage canal section running n-s 300m to the east of Domuztepe indicates that Possible branching of Karacay at undated times would have effected the immediate make up of the site surroundings and have isolated the site in a more marked way. Oval mound party carved up by construction of canals, in middle of fields.

Late Halaf (Phases A1-A2-A3) on the surface. Earlier material similr to Samarra and Neolithic lithics have been found in surface collections. Roman occupation.

KM 99

Height-5 m. Area- .5 ha.

Southern Zone. 33.7N 29.9E. Gravel road S of main Türkoğlü road and canal. Low rounded mound, no distinctive features.

General Ubaid pottery. Medieval?

KM 102, Hinametbaba

Height-8 m. Area-3.14 ha.

Central Zone, Map N38-A1. 48.8N 29.9E. Decimal Deg. N37.469 E37.077. Just N of Cinarlı village off Antep road. Edge of hills surrounded by recently plowed fields. Terraced stony mound with stone piles and overgrown cut on top plus several holes 10-9 meters from south to mound.

Undiagnostic prehistoric lithics. Hellenistic?

KM 103, Sivrice höyük

Height-9 m. Area- .33 ha.

Southern Zone, Map N38-A1. 42.1N 33.5E. In farm of same name, agricultural, cotton. Small high mound, lower and more extensive terrace partly obscured by village.

Neolithic to Halaf lithics. Late Chalcolithic pottery. EBA, LBA, Iron, Hellenistic? Medieval?

KM 110, Karakuyu höyük

Height-5-6 m. Area- 1.7 ha.

Southern Zone. 31.4N 35.2E. Decimal Deg. N37.313 E37.140. Hanatası H. to west. Antep road and mountains to east. Low mound crossed by field wall near Hanabası H. Some possible robbed out graves on site. Many loose stones scattered around.

Presence of early to mid 7^{th} millennium ceramics. Potential 6^{th} millennium general but faint. EBA, Hellenistic? Medieval?

KM 112, Damuk höyük

Height-5 m. Area- .9 ha.

Southern Zone. 35.6N 34.5E. Decimal Deg. N37.351 E37.131. Near KM 78 on Antep road. Mountains directly to east. Low mound plowed surrounded by cotton fields, the pipeline road runs through. Many loose stones scattered around the site. Cement marker in center. Oval shape with low flat area in south.

Late Chalcolithic pottery. Medieval?

KM 113, Güzelyurt höyük

Height-1-2 m. Area- .44 ha.

Northern Zone. 52.3N 24.8E. Maraş to Narlı road at Güzelyurt. Half cotton field, half wheat field. Remains scattered on natural hill. Difficult to estimate depth of deposit. Many loose stones scattered around site. Possible plundered burial in center of site. Overlooking Narlı road.

Late Chalcolithic pottery. EBA, MBA, Hellenistic?

KM 116, Karaziyaret

Height-unknown Area-unknown

Northern Zone. 55N 22.5E. Decimal Deg. N37.523 E36.991. Top of large forested hill, pine trees. On top of a large hill near KM 115.

Lithics similar to Domuztepe Halaf material.Not a blade industry, denticulated scraper like DT.

KM 118, Hamam Höyük

Height-3.5 m. Area- .28 ha.

Northern Zone. 53N 17.2E. Decimal Deg. N37.506 E36.933. Railroad tracks near Kiyikci tepe. Cultivated fields all around. Höyük planted with wheat burned but not yet plowed this season. Low mound near railroad. Recently burned. Site being regularly cultivated-probably now lower than it originally was.

Late Chalcolithic pottery. EBA, Medieval?

KM 119, Yılgınlıhöyük

Height-10 m. Area- .38 ha.

Northern Zone. 56.7N 21.1E. Decimal Deg. N37.538 E36.975. Narlı road between two factories. Water tower to west, water storage depot on top-the rest of the mound is plowed.

Late Chalcolithic pottery. EBA, Iron, Hellenistic?

KM 120, Çamurluhöyük

Height-14-15 m. Area- .64 ha.

Northern Zone. Maraş map. 55.8N 18.3E. Decimal Deg. N37.532 E36.948. Maraş to Narlı road, surrounded by cotton fields. Migrant worker camp to south. Site overgrown with weeds except on west slopes where grapes are planted. Top is flat at 40 meters in diameter. Steep on north side, gently sloping to south. East and west sides damaged by plowing. Original shape changed due to plowing and cultivation.

Incised and coarse ceramics, bow-rim jar with brown wash indicate general 6th millennium closer to Late Halaf-Ubaid spectrum. Late Chalcolithic pottery. EBA, LBA, Iron, Hellenistic?

KM 124, Kayabellihöyük

Height-5 m. Area- .44 ha.

Northern Zone. Decimal Deg. N37.559 E36.912. Between major powerlines at the end of cement producing area. Cement factories just to NW fields on other sides. There are 2 power lines very close. Rice laid on plastic covering some sections at mound. Mound founded on layer of pebbles, probably natural, that can be seen in cuts and trash pits.

Red slip burnished and general Halaf presence. MBA, LBA, Hellenistic?

KM 125, Topaloğluhöyüğü

Height-3 m. Area- .44 ha.

Northern Zone. 58.4N 14.5E. Decimal Deg. N37.552 E36.900. KM 124 to west, dump to south, powerlines to north. Many beehives on mound. Low mound completely barren with tent and bee hives on top, probably used for field workers tent city. Loose dusty dirt covering mound markers. Gently sloping on all sides, circular cut by road. Surrounded by cotton fields.

6th millennium ceramics include thick burnished known from Domuztepe A1 and A2 mainly. Classic Ubaid ceramics. Potentially was occupied in Late Halaf and than later in Ubaid again. Also has EBA, MBA, LBA.

KM 126, Karnıyarık

Height-unknown Area-unknown

Northern Zone. Decimal Deg. N37.549 E36.894. Mound totally ruined by road and canal, almost nothing left and much is covered by road gravel stones. Near KM 125.

General Late Neolithic through 6th millennium and Late Chalcolithic pottery.

KM 127, Cinlihöyük

Height-7 m. Area- .42 ha.

Northern Zone. 59.3N 13E. Decimal Deg. N37.554 E36.887. Kayseri Rd, power lines, big canal. Surrounded by plowed fields, a few trees at base. Medium sized mound, very disturbed and many robber holes. Giant hole with giant cave in center.

Late Chalcolithic pottery. EBA, Hellenistic?

KM 129, Örenkücük

Height-6 m. Area- 3.63 ha.

Northern Zone, Map M37-C4. 55.3N 9.5E. Decimal Deg. N37.523 E36.842. Same as large site adjacent; oval mound cut into by agricultural terracing and irrigation works; most of sherds from center.

Good sample of Late Neolithic lithics. Blade cores, almost all grey obsidian. Better obsidian than DT, looks all central Anatolian, some obsidian looks reworked. Needs to be better documented. Hellenistic? Medieval?

KM 131, Kadıoğlu Çiftliği

Height-8 m. Area- .95 ha.

Northern Zone, Map M37-C3. 54.5N 13.3E. Decimal Deg. N37.515 E36.889. Rich agricultural area, cotton, corn. Road to Dadalı, Önsen. Site edges have been cut into by farm construction.

Ubaid and Late Chalcolithic pottery. EBA.

KM 133, Dedepaşahöyük

Height- .5 m. Area-2.78 ha.

Northern Zone, Map M37-C3. 54.5N 13.5E. Decimal Deg.N37.516 E36.887. Next to stream, flattened site. Only indication of occupation now is slight difference in soil coloration.

Bichrome, nail impressed, incised and classic Ubaid ceramics. Also Halaf like lithics similar to post or end of DT. Late Chalcolithic resembling Uruk ceramics. Large knives and scrapers. Hellenistic?

KM 134, Alıçlıtarla

Height-13 m. Area-1.33 ha.

Northern Zone, Map M38-D4. 58.2N 37.0E. Decimal Deg. N37.556 E37.082. Surrounded by cotton fields to the W, E, and S. 100 m. south of Erkenez riverbed; several farmhouses .5 km. to SE; power lines run to the N of site. Northeastern half of mound is high mound which overlooks the river bed, while southwestern side blends gradually into cotton fields. Half of site planted with cotton, other half is burnt field site appears to be on a plateau that is out of the river.

Neolithic pottery. Neolithic lithics, similar to KM 129. Knapping debris, large pieces indicate early stages of knapping Late Neo cores, pointy things, some similar to DT, different types of flints.

KM 135, Oburtarla

Height-1.5 m. Area- .13 ha.

Northern Zone, Map M37-C3. 55.1N 20.1E. Decimal Deg. N37.520 E36.962. Surrounded by plowed fields; KM 117 visible 2.5 km. to W and KM 120 is 1 km. to NW. Mostly plowed over with some stones left on top. Small flat site with architectural foundation on south side; circular arrangement of stones- house? Sherds and flints found around foundation and general area.

General 6th millennium Halaf -Ubaid spectrum pottery. Iron, Hellenistic? Medieval?

KM 136, Gellezhöyük

Height-1m. Area- .2 ha.

Northern Zone, Map M37-C3. 58.1N 18.7E. Power lines crossing NW-SE. Slight rise in cotton field-plowed over. Sherds spread over 50 m. diameter circle; road cut also yielded sherds. Not much left of site.

Ubaid pottery. Hellenistic? Medieval?

KM 137, Köftülhöyük

Height-34 m. Area-4.91 ha.

Northern Zone. Map M37-C3. 60.5N 23.2E. D.S.I. visible to south; city of Maraş 4 km. to W. Road 2 km to N; rocky outcrop 1 km. to NW. Tall steep, round mound with 2 cuts; farm house on west side surrounded by tomato and eggplant fields.

General Halaf? MBA, LBA, Iron, Hellenistic? Medieval?

KM 138, HacıKenan Tarlası

Height-0 m. Area- .07 ha.

Northern Zone, Map M37-C3. 58.8N 20.5E. Decimal Deg. N37.557 E36.965. Factory area to N; power lines crossing NE to SW. Andirin road 5 km. to south; factories to the west. Site is now all cotton. Completely plowed over and planted with cotton.

Late Chalcolithic ceramics and one standard Northern Uruk type sherd potentially accidental occurence. Medieval?

KM 141

Height-5 m. Area- .6 ha.

Northern Zone, Map M37-C3. 59.2N 17.2E. Decimal Deg. N37.559 E36.931. Site is in dump just south of Kültür Merkezi. Long oval mound with top cut off. Partially covered in scrup with small dirt road crossing over mound. Surrounded by garbage dump.

Halaf general (?)

KM 147, Ziyaret

Height-1.5 m. Area- .28 ha.

Northern Zone, Map M37-C4. 54.7N 8.8E. Decimal Deg. N37.517 E36.836. Ösen to NE outside Ziyaret village along road. Two low rises in cotton/wheat field. Most of the material comes from irrigation channels in cotton field. Stones on surface may indicate architecture close to the surface; ground stone pieces on site.

Lithic inventory belonging to Neolithic general. Lots of obsidian, smaller stuff, earlier than KM 129, some blade cores.

KM 148, İtinciri

Height-2 m. Area- .64 ha.

Northern Zone, Map M37-C4. 54.9N 9.1E. Decimal Deg. N37.520 E36.839. Trees on top in cotton and wheat field. Cotton to E; wheat to S, partly plowed. Mound off Ösen road to NE. Low rise, little on top but ground stone chipped and obsidian on sides.

Lithic site. Lots of obsidian, similar to KM 147, small blades, lots of flakes, mostly retouched on blades.

KM 149, Sergen

Height-1.5 m. Area- .2 ha.

Northern Zone, Map M37-C4. 56.3N 10.9E. S of Ösen road. Low rise SE of Ösen, locals say they find stuff here but there is very little.

Lithic site with Aceramic Neolithic inventory.

KM 150, Büyükcamsulhöyük

Height-2.5 m. Area- .79 ha.

Northern Zone, Map M37-C4. 56.9N 11.5E. On edge of old river floodplain S of Maraş. Cinli H. 25 degrees to NW. Original shape of mound is hard to guess since it is cut by old farming works. On top is plowed, sherds scattered all over. Section in cut is relatively shallower occupation on river gravels.

Late Chalcolithic pottery. Iron, Hellenistic? Medieval?

KM 159, Aydınkabak

Height-8 m. Area-2.54 ha.

Northern Zone. Map N37-B1. 43.0N 4.6E. Decimal Deg. N37.414 E36.793. Village to NE; stone garden walls, spring at NW edge. Flat stony site with very spread out collection. Low elevation with tree on top, possibly both early and late occupation.

Ubaid pottery. Hellenistic? Medieval?

KM 163, Kızıltrla

Height-1.5 m. Area- .07 ha.

Northern Zone, Map N37-B1. 46.5N 3.5E. Decimal Deg. N37.440 E36.777. Just south of road to Gavur Mağası; in valley. Site is actually half covered by road. Half cut by cotton field which is under cultivation. Surrounded by poplar trees to S, E, and W. Site is on edge of original flood plains.

Ubaid pottery. Iron, Medieval?

KM 164, Kaleboynu

Height-25 m. Area-1.77 ha.

Northern Zone, Map N37-B1. 45.9N 3.2S. Decimal Deg. N37.436 E36.775. Just east of village of Delicek in fertile valley with mountains to E and W. Very tall mound which begins behind village houses and continues on other side into rolling hill area. Top of site is plowed and used as grape vineyard and for pistachio trees.

Late Chalcolithic lithics. EBA, MBA, LBA, Iron, Hellenistic?

KM 171

Height- 0 m. Area- .2 ha.

Northern Zone, Map M37-C4. 54.8N 11.6E. Paved road to Sır dam to west 100 m. Canal cuts flat site distinguishable only by slightly yellowish color from black irrigated soils. Dimensions of flttened site difficult to determine but possibly oval divided by canal.

Neolithic stone bowl fragment and Late Chalcolithic pottery.

KM 177, Karasaltarlı

Height-0 m. Area- .24 ha.

Northern Zone, Map M37-C4. 61.2N 7.2E. Edge of dam lake, partially covered by lapping shores; rolling hills to N. Now planted with cotton. Now only flat but reported to be mound before lake covered it. Surface materials water worn and whole thing has once been covered.

General Neolithic lithic site. Sickle blades, no big blades. Iron, Hellenistic?

KM 179, Çakıl Tarla

Height-1-2 m. Area- 1.32 ha.

Northern Zone, Map M37-C4. 63.4N 5.6E. Decimal Deg. N37.602 E36.804. Aksu river/dam shore. Kayseri Road to NE; opposite of KM 173. Tree and little wadi visible to NE; to SW is KM 172 across river. Cotton, wheat, flat rocky soil. Much natural flint on mound. Extensive flat site, perhaps remnants of wall.

Prehistoric undiagnostic lithics. Hellenistic? Medieval?

KM 181, Üngüt

Height-16 m. Area-2.69 ha.

Northern Zone, Map M37-C4. 63.9N 8.9E. Decimal Deg. N37.595 E36.836. In middle of village near local summer dondurma stands. Steep sided mound with edges nibbled away by modern housing.

Late Chalcolithic pottery. EBA, LBA, Iron, Hellenistic? Medieval?

KM 188, Deve Konağı

Height-0 m. Area- .2 ha.

Northern Zone, Map M38-D4. 58N 32.8E. Decimal Deg. 37.553 E37.105. South of Erkenez riverbed. Power lines from the N to SE; dirt road crosses hill just to S of site and continues W and NW. Site is on top of natural hill-eastern and southern areas have been plowed while north and west are very rocky.

Neolithic lithics. Lots of stuff but not much diagnostic; scraper, denticulated.

KM 189, Çınarcıkparahöyük

Height-15 m. Area- .38 ha.

Northern Zone, Map M38-D4. 59N 31.7E. Decimal Deg. N37.560 E37.090. Directly on southern edge of Erkenez river bed. Mountains to N, W, and S; mostly surrounded by fields. High circular mound, soil is very rocky and unplowed. On northern lower slope all is gravel. Northern slope also cut by dirt road.

Prehistoric, Neolithic, Halaf, Late Chalcolithic pottery. Undiagnostic prehistoric lithics. EBA, MBA, LBA, Iron, Hellenistic? Medieval?

KM 191, Kabaktepe

Height-0 m. Area- .18 ha.

Northern Zone, Map M38-D4. 60N 28.6E. Decimal Deg. 37.569 E37.057. Bordered by small canal to the S and E; located on very slight slope halfway down

mountain. Rocky scrubby area. Naturally flat area with remains of 1 or 2 houses. Erkenez riverbed runs to the south of site; just south of site are wheat fields on the lower slopes of the mountains. Village of Yusufhacılı is approx. 1.5 km. to the north.

Late Neolithic lithics. Medieval?

KM 194, Cakalı Tarla

Height- .5 m. Area- .05 ha.

Northern Zone, Map M38-D4. 58.1N 28E. Decimal Deg. N37.551 E37.051. 40 meters N of KM 193; just south of Erkenez River- right on the edge of the river. Hardly any rise- collection of large rocks in center; site covered by cotton field.

Neolithic pottery, obsidian blade. Medieval?

KM 196, Dalçınarhöyüğü

Height- 16 m. Area-2.54 ha.

Northern Zone. 60.1N 26.0E. Shiria T. to E; south of Peynirdire asphalt. At edge of highly fertile Erkenz Su flood plain. Wash to E, mostly cotton and some garden crops. High mound possibly with a fort at top. Slopes fairly steep, bottom nibbled at east and south by road.

Late Chalcolithic pottery. Lithics: big lump of obsidian. EBA, MBA, LBA, Iron, Hellenistic?

KM 199

Height-2 m. Area- .03 ha.

Northern Zone, Map M38-D4. 58.8N 32.1E. Decimal Deg. N37.558 E37.090. Road to Emirler, KM 196 is 1 km to west. Mostly stubble, many goat grazing. Small mound possibly flint knapping site. Very scattered concentration but many surface stones suggest campsite.

Lithic site, late Neo like lithics resembling KM 191.

KM 202

Height-4 m. Area- .64 ha.

Central Zone, Map N38-A1. 48.6N 25.2E. Decimal Deg. N37.467 E37.023. Between Pelit 101 and 74 near village of Tevekelli. Off asphalt. Irrigated cotton fields to E. Round mound recently plowed with many large coarse ware body sherds. Edges difficult to determine to W and E.

Late Chalcolithic pottery. Late Neolithic-Aceramic Neolithic lithics (?). EBA, Hellenistic?

KM 203

Height-1 m. Area- .2 ha.

Central Zone, Map N38-A1. 48.1N 23E. Decimal Deg. N37.460 E37.004. Between KM 74 and 202 near Tevekelli village. Site flattened and spread over fields but probably less than 50 m. originally in diameter.

Late Chalcolithic pottery. Late Neolithic lithics inventory.

KM 204

Height-3.5 m. Area-1.77 ha.

Central Zone, Map N38-A1. 47.8N 23.2E. Site 74 to NE 100 degrees. Bank in Tevekkelli village 1 kkm. NW. Burnt wheat fields. Low round mound cut by major canal on our map. Stones excavated in center.

Late Chalcolithic pottery. Late Neolithic lithics, similar to KM 202, may be later Halaf. EBA, Iron, Hellenistic? Medieval?

KM 205

Height-unknown Area-unknown

Central Zone. 48.2N 23.3E. Cemetery 200 m. to west. KM 74 to east. Marshy area with drainage canal to east, Pellit H. to north. Color (grey) differentiated patch flat site next to burnt wheat field.

Late Chalcolithic pottery. Hellenistic?

KM 210, Haydarhöyük

Height-10-12 m. Area- .79 ha.

Southern Zone, Map N38-A1. 44.8N 33.9E. Decimal Deg. N37.433 E37.123. Adjacent to Gaziantep Rd. Tulhun and KM 102 visible. Wheat, cotton, acorns, walnuts, rich agriculture. High mound much disturbed by modern occupation with heavy concentration of modern trash in most open areas. Collections from open areas within village.

Halaf general and Late Chalcolithic pottery. EBA, MBA, Iron, Hellenistic? Medieval?

KM 211

Height-3-4 m. Area- .95 ha.

Central Zone, Map N38-A1. 48.5N 33.0E. Electric line, 200 m. southeast. Spring at foot. Pepper, wheat, oak, pistachio and olives on hillside. In pocket valley surrounded by low oak-pistachio hills. Hill slope site with rich surface material in recently plowed areas, appears to be using a lot of the vesicular basalt from nearby.

General 6th millennium ceramics. Late Chalcolithic pottery. Late Neolithic lithics. Three bits of obsidian, probably aceramic Neolithic. MBA, LBA, Hellenistic? Medieval?

KM 213, İncirli Tarla

Height-5 m. Area- .2 ha.

Central Zone, Map N38-A1. 49.4N 31.2E. Oak in center of field near Kucuk terolar. NATO base to SE, Hiimmet Baba to S. 1 km. north of Gaziantep Rd. Huge canal spoil bank between it and hill into which NATO base is dug. Extensive site on hills with thin sherd scatter.

Ubaid pottery. Hellenistic? Medieval?

KM 214, Kolulu höyük

Height-.5 m. Area- .5 ha.

Southern Zone, Map N38-A4. 29.9N 25.0E. Cennetpinar 300 m. to west. Site in cotton fields next to Kolulu well where sheep are watered. Mostly irrigated cotton fields, some sugarbeets. Low round mound but has been, according to muktar, so was probably higher, sand ashy part in middle is where most material concentrated. Original dimension difficult to determine but couls be a single period L. Chalco site.

Classic pale green Ubaid and Late Chalcolithic pottery. EBA.

KM 216, Tut (Dut) Dağ

Height-unknown Area-unknown

Central Zone, Map N37-B3. 33.9N 22.3E. In village of Kelibişler, on Tutdağ tepe; top of hill has water installation and cave which is mostly full but has been partially excavated by villagers leaving some sherds and flints scattered on the hillside.

Paleolithic site. Hellenistic? Medieval?

KM 217

Height-0 m. Area-unknown

Central Zone, Map N37-B3. 33.6N 22.6E. Narrow wadi on east; village on south and valley leading to Domuztepe; rocky slope. On hillside of much natural flint. There is much knapping debris but no real concentrations and only few scattered tools. There are a few sherds scattered near villages but mostly aceramic.

Late Neolithic lithics. Looks like KM 43 Neolithicy.

KM 221

Height-.5 m. Area- .38 ha.

Central Zone. 39.8N 13.3E. Site 4 and Türköğlü road to south; small canal to N. Pumpkin and cucumber and corn fields surround it. Small flattened site in middle of pumpkin field. Host tells us it was a cemetery but not much left. Original shape obliterated but possibly low round mound with stone cist graves.

Late Chalcolithic pottery. EBA, Medieval?

KM 227, Demirciler

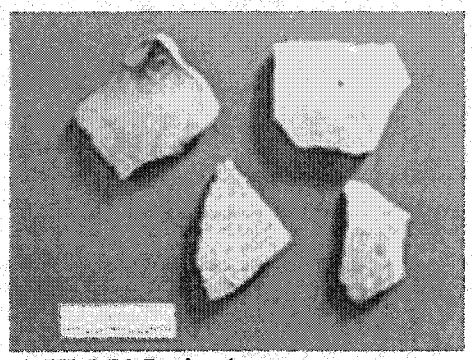
Height-unknown Area-unknown

Central Zone, Map N38-A4. 36.6N 26.0E. Decimal Deg. N37.358 E37.036. Village of Demirciler at food of hills. Along Aksu Gök Pinar. Stepped stone quarry site with large gate lion on an angle, possibly in place; one side is unfinished.

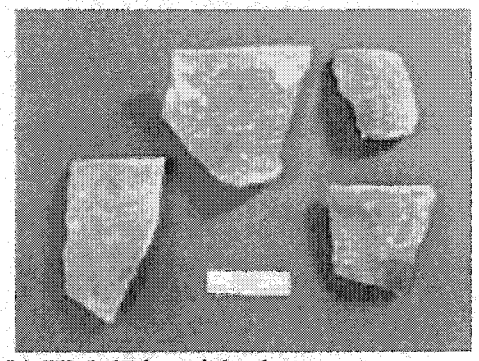
Neolithic by lithics. Hellenistic?

Appendix B KM Survey Ceramics Catalogue

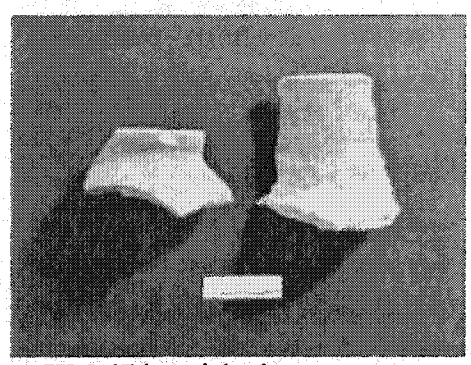
Fig.B.1. Photos of 7th millennium Ceramics from KM Survey



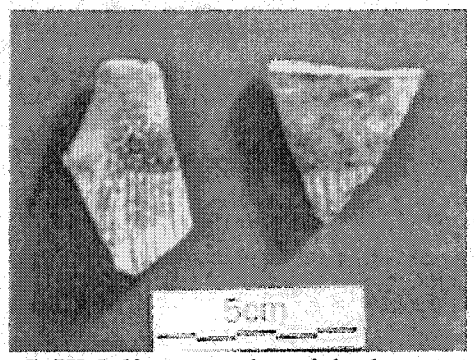
a) KM 70 Incised



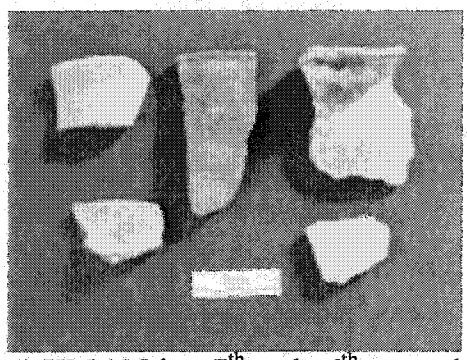
b) KM 67 burnished



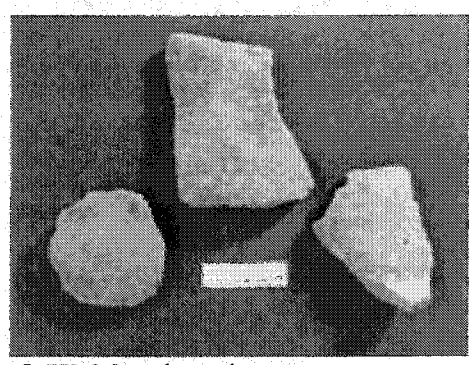
c) KM 67 burnished



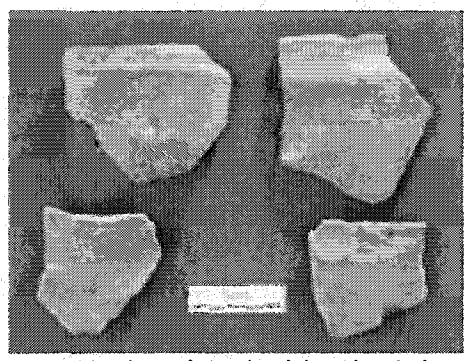
d) KM 69 pattern burnished



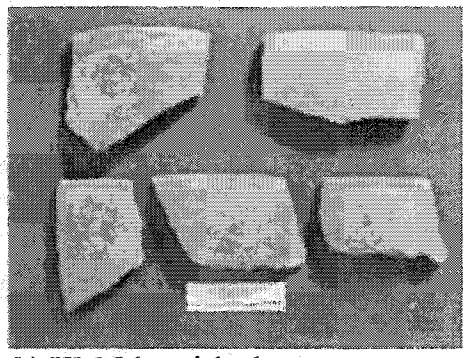
e) KM 125 late 7th early 6th general



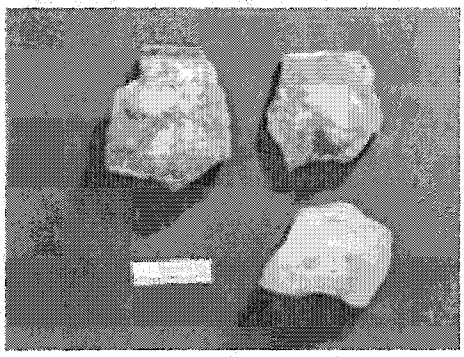
f) KM 8 red wash



g) KM 8 burnished with raised rim



h) KM 8 burnished



i) KM 67 coarse ware with lugs

Fig.B.2. (a-i) 7th millennium Ceramics from the KM Survey

Fig. B.2.a

A. KM 70/530. d:260 mm. Creamy brown burnished/ smoothed but not shiny (inner surface is grayer than outer). Grit tempered, horizontal burnish marks on the rim.

B. KM 70/532. d:320 mm. Buff-brown burnished on exterior and interior. Outer is better burnished. Handmade, fairly dense, medium fired, no black core. Temper: grit/veg. Pinkish slip exterior.

C. KM 70/526. d:unknown.

D. KM 70. d:300 mm. Red burnish-like slip on both sides. Very chaffy-gritty surface. Brick buffered or surface color. The rim is very uneven and lipping on the outer surface.

E. KM 70. d:320 mm. Burnished but not shiny, very light brown, dark core sandy grit treatment visible on the surface. Grey patches on the surface from firing.

F. KM 70/524. d:200 mm. Dense, red core with small grits. Coarse softened surface but no burnish, slip dull brown/ brown on both surfaces.

G. KM 70/531. d:230 mm. Light-brown, dull burnished creamy and reddish/brown. Varieties of same fabric exist in the assemblage.

H. KM 70. d:180 mm. Darker red/brown burnished (both exterior and interior) Interior: more reddish. Exterior: more brownish.

I. KM 70/533. d:140 mm. Dull burnished.

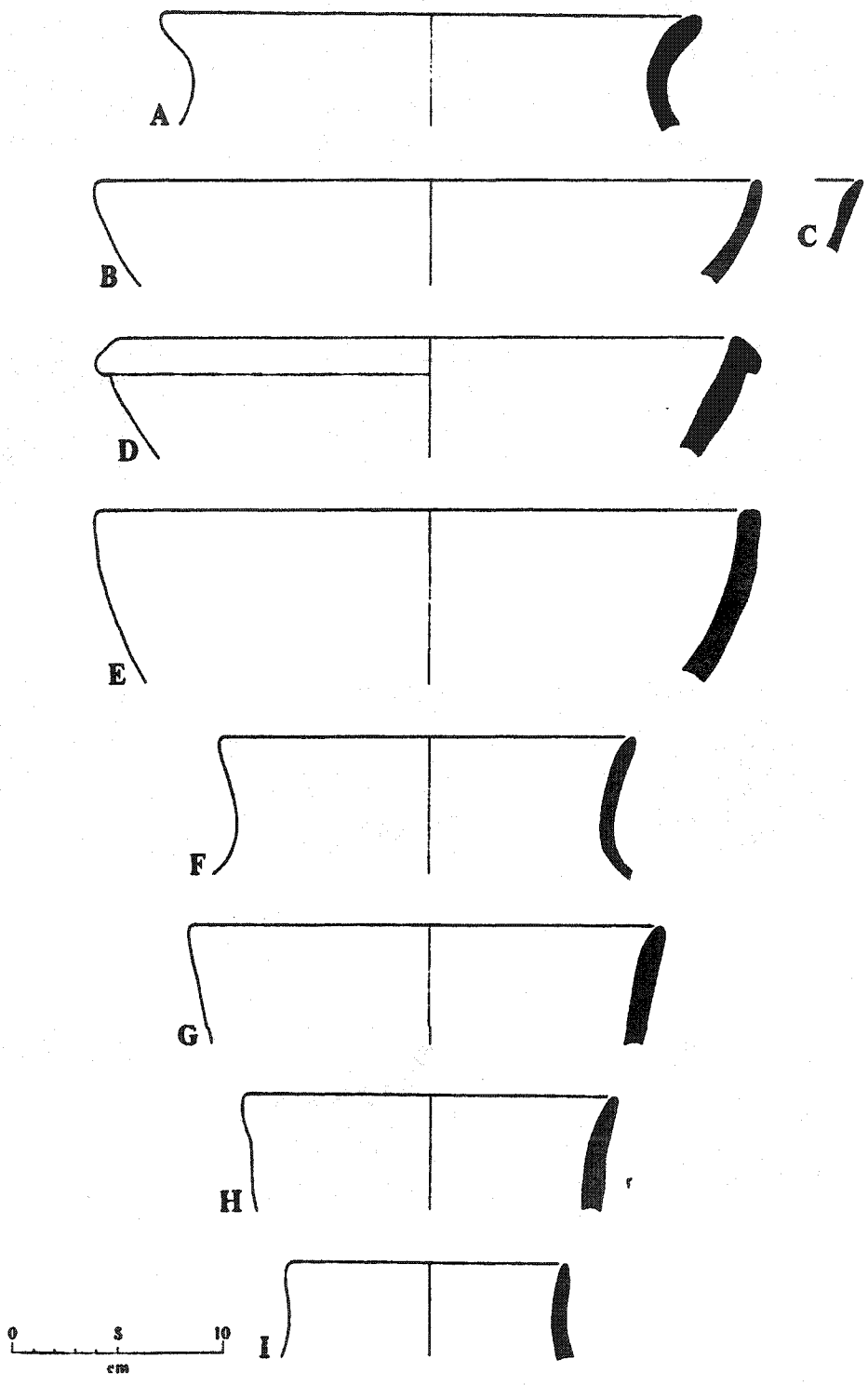

A
B
C
D
E
F
G
H
I
0
5
10
cm

Fig.B.2.b.

A. KM 70. d:100 mm. Dense, medium fired. Sandy white grits visible on brown/red surface. Surface is rough, no treatment.

B. KM 70/522. d:200 mm. Red/brown, well burnished. Both outer and inner similar treatment. Handmade, dense, medium fired. Dark grayish core. Grit/veg. Tempered.

C. KM 70/543. d:205 mm.

D. KM 70/534. d:210 mm. Dull burnished. Red-brown.

E. KM 70/523. d:180 mm. Outer: Brown/red burnished. Interior: Black burnished. Dark black/grey core. Handmade. Small grits and veg.

F. KM 70/535. d:145 mm. Dull burnished. Red/brown.

G. KM 70/528. d:unknown.

H. KM 70/544. d:180 mm. Grey/black burnished. Handmade, fairly dense. Small grits and veg. (nonvisible temp) Burnish marks horizontal and vertical can be seen on the exterior face. Dark grey surface color.

I. KM 70/500. d:120 mm.

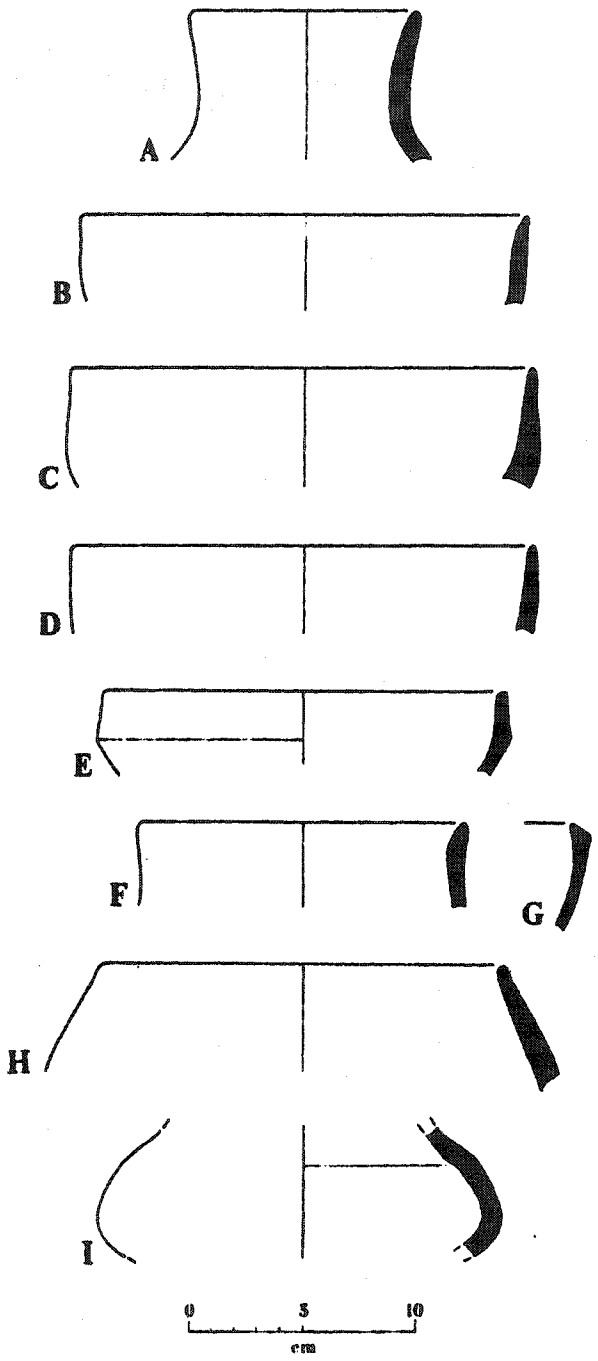

A
B
C
D
E
F
G
H
I
0
5
10
cm

Fig.B.2.c.

A. KM 70. d:unknown. Black paint, Halaf/Ubaid. Pink yellow fabric, well fired.

B. KM 70. d:unknown. Ext: dirty red/black slip with heavy grits/rough surface. Int: black. Poorly fired.

C. KM 70. d:unknown. Ext: light reddish, brown slip on both surfaces. Medium fired, thin grey core, small grits, reddish paste.

D. KM 70. d:unknown. Partly burnished and incised. Ext: light brown slipped surface. Int: black slipped surface. Fabric/paste: reddish.

E. KM 70. d:unknown. Black interior. Fairly dense, medium fired. No dark core. Grit temper, reddish yellow paste. (Partly burnished outer surface).

F. KM 70. d:unknown. Heavy grit tempered. Surface treatment is light red/orange. Almost burnished before. Incised, inner surface is buff pink.

G. KM 70. d:unknown. Partly burnished. Exterior surface below and above incisions. Medium fired, white mineral and vegetable particles.

H. KM 70. d:unknown. Red paste and inner surface/slip. Outer: Darker grey/brown. Small grits.

I. KM 70. d:unknown. Handmade, medium fired, no black core. Small grits/veg. Red burnished exterior surface.

J. KM 70. d:unknown. Outer surface very light brown/buffish slip. Int: dark black/grey. Handmade, dense medium fired, pale grayish section color. Mainly veg and some grit.

K. KM 70. d:unknown. Dark red brown slip. Outer surface smooth but not burnished. Interior is like fabric: dull black/brown gritty sands.

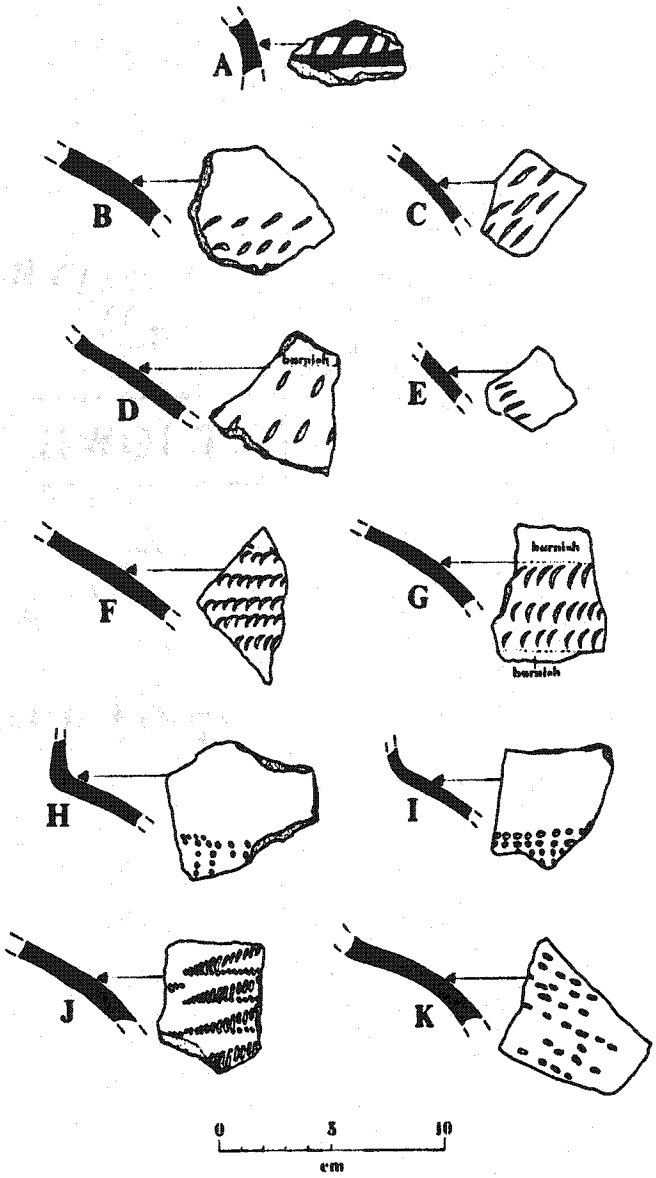

A
B
C
D
burnish
E
F
G
burnish
burnish
H
I
J
K
0
5
10
cm

Fig.B.2.d.

A. KM 8/619. d:265 mm. Red wash on light brown surface, gritty thick/dark core outer surface. Almost like burnished but dull.

B. KM 8/606. d:unknown. Light brown burnish. Slight raise on the exterior rim. Dark/black areas on the interior. Interior is also burnished. (unknown angle and diameter).

C. KM 8/503. d:410 mm. Light brown burnished, white gritty. Outer is light brown, interior is orange black core.

D. KM 8/500 (605). d:410 mm. Red wash on brown surface. Gritty black grey core.

E. KM 8/620. d:100 mm. Amuq A type brown-black burnished.

F. KM 8/602. d:70 mm. Very black core, black dull surface. (white grits and other reddish fabric). Burnt sherd.

G. KM 8. d: 60 mm. Medium-fired, fairly dense. Black core. Veg and grit/white. Outer surface was partly burnished.

H. KM 8/623. Brown-black burnished, grey core.

I. KM 8/622. d:unknown. Brown burnished, gritty dark core.

J. KM 8/600. d:300 mm. Outer: burnished/washed. Interior: brown wash. Very dark black core. Grit with minimal white. Surfaces are not homogenous to touch. (light brown colored on the exterior).

K. KM 8/621. black burnished. d:unknown.

L. KM 8/530. d:270 mm. Red burnished on interior and exterior. Black-dark gritty core. Line impressed depression on body.

M. KM 8/613. d:210 mm. Red burnished, grey core. Outer surface has burnish lines visible. Inner surface is more homogenous but dull. Gritty.

N. KM 8/614. d:unknown. Orange/brown burnished. Interior surface is lighter and more homogenous but dull grey core, gritty.

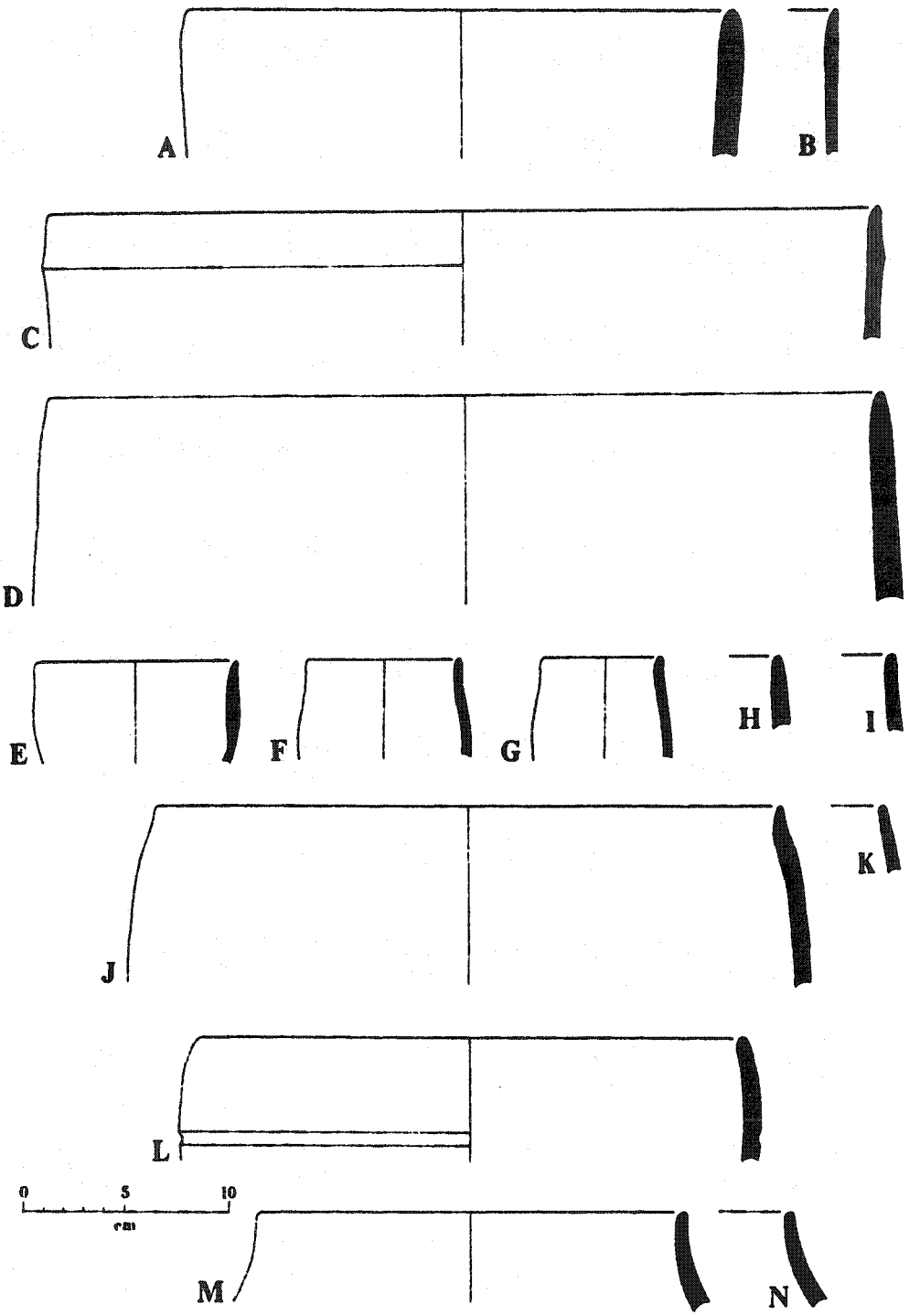

A
B
C
D
E
F
G
H
I
J
K
L
0
5
10
cm
M
N

Fig.B.2.e.

A. KM 8/502. d:240 mm. Red wash maybe burnished once on light brown surface. White grits. Burnish on the interior. Grey core.

B. KM 8/628. d:160 mm. Red brown burnished exterior. Brown burnished int. Gritty dark core.

C. KM 8/618. d:180 mm. Red/brown burnished on light edge surface. (very scrappy and concreted). Grey core, grits are not visible.

D. KM 8/ 607. d:140 mm. Fairly dense, medium fired, black section. Grit and veg tempered. Both surfaces burnished. Ext: red, slip burnished. Int: black burnished. Amuq B? Coarse red slipped ware.

E. KM 8/626. d:220 mm. Int and ext brown burnished. (interior lighter brown) Exterior: darker brown.

F. KM 8/612. d:180 mm. Dull interior and exterior surfaces. Ext: red/orange. Int: Blackened gritty (whitened) grey core.

G. KM 8/631. d:110 mm. Light brown burnished on outside. Interior: red/light brown. Grey core, white and other grits.

H. KM 8/608. d:135 mm. Dull brown burnished. Raised-rim bend. White and other gritty core. Exterior and interior similar grey core.

I. KM 8. d:220 mm. Fairly dense, medium fired grey core. Grits, pinkish surface color. Partly preserved dark reddish slip on both sides.

J. KM 8/630. d:105 mm. Red/brown burnished exterior. Interior is brown-blacky dark grey core, gritty.

K. KM 8/629. d:115 mm. Int. and ext. light brown burnished. White grit and other, grey core.

L. KM 8/617. d:180 mm. Red/orange burnished. Grey core, slightly thicker close to rim, grit core. Outer surface has darker burnish lines. Inner surface dull brown, grit (white and other one visible).

M. KM 8/616. d:215 mm. Red/brown burnished. Grey/clunky. Surface: some parts orangy red/dark red burnished. Interior: brownish burnish below rim.

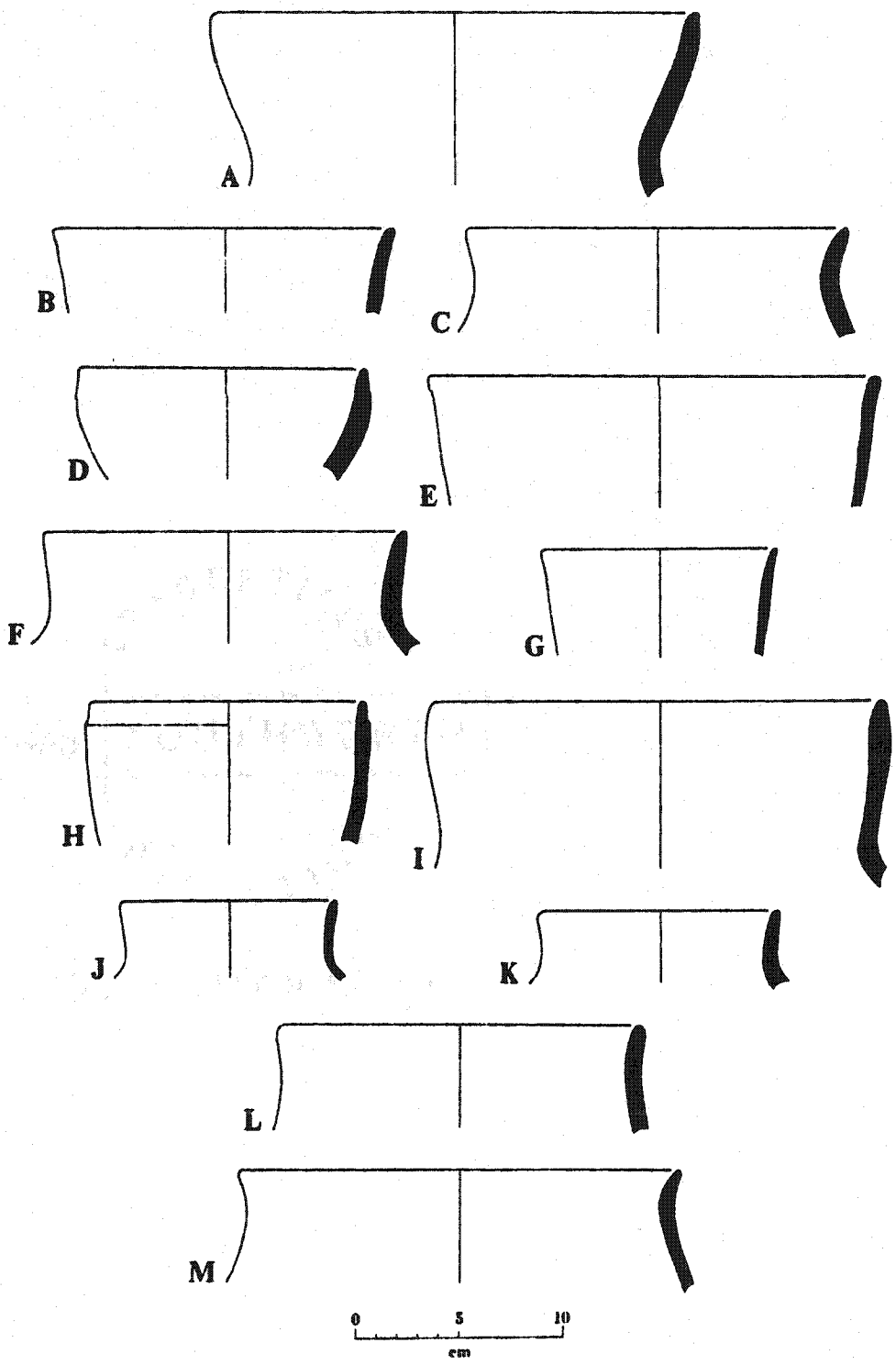

A
B
C
D
E
F
G
H
I
J
K
L
M
0
5
10
cm

Fig.B.2.f.

A. KM 8/506. d:320 mm. Red burnished on both surfaces. (Amuq A). Fairly dense, medium fired, black core, some small grit and veg. Temper.

B. KM 8/510. d:unknown.

C. KM 8/520. D27-63 (3^{rd}). d:250 mm. Double raised rim. Very dark/black burnish on ext. and int. Black core, white grits.

D. KM 8/624. D27-70. (4^{th}). d:280 mm. Red/brown burnished on outer side. Interior: dull brown. White grit, black core.

E. KM 8/627. D27-70 (2^{nd}). d:370 mm. Light brown burnished exterior. Light or buff interior (dull). Gritty grey core.

F. KM 8/611. D27-66. (3^{rd}). d:360 mm. Ext: red/brown burnished. Int: red dull burnished. Dense white grits. Grey core, raised rim band.

G. KM 8/531. D27-63 (4^{th}). d:260 mm. Ext: red brown burnished. Raise rimband. Int: not burnished but smoothed (dull red). White and other grits. Not well fired, grey core immediately below surface.

H. KM 8/625. D27-70. (3^{rd} top). d:240 mm. Brown burnished exterior. Red dull interior with black areas. Both surfaces not homogenous to touch. Gritty core.

I. KM 8/610. d:220 mm. Red wash (Amuq B Coarse simple ware, chaff impressions on surface from temper). Fairly dense, medium fired, black core, vegetable temper, reddish surface color. (no surface treatment other than smoothed). Brown-red brown outer surface. Inner surface more reddish.

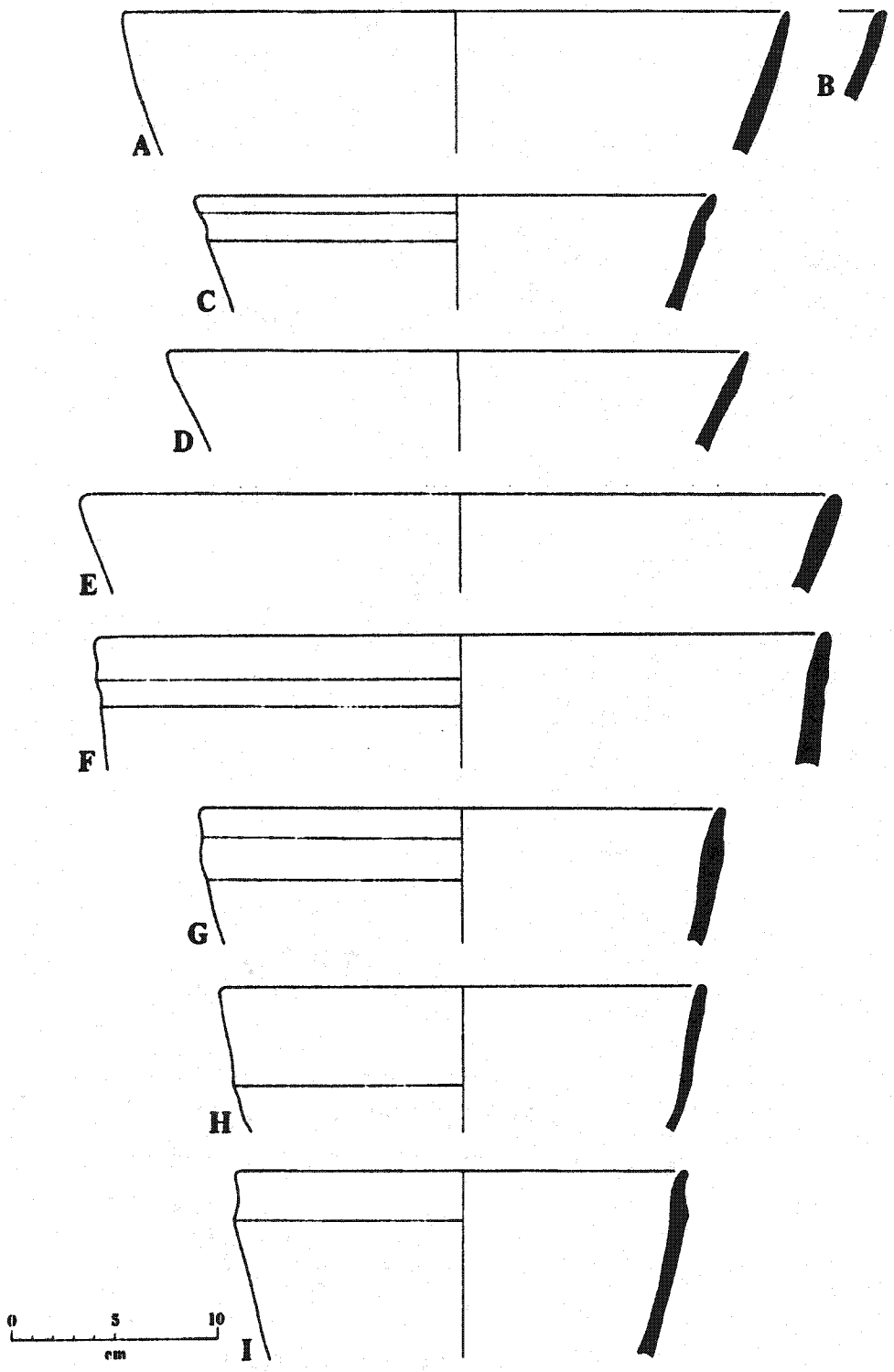

A
B
C
D
E
F
G
H
I
0
5
10
cm

Fig.B.2.g.

A. KM 8/507. d:150 mm. Black Burnished from mid to late 7th millennium

B. KM 8/615. d:190 mm.

C. KM 8/609. D27-67 (3rd). d:130 mm. Red burnished, grey core, gritty clunky. Surface not homogenously colored. Interior surface is browner than outer.

D. KM 8. d:100 mm. Medium fired, fairly dense, black core, veg/grit temper. Burnishing (slip) on the outer surface. Light brown paste color. Light reddish yellow slip.

E. KM 8/603. d:160 mm. Brown-red paint on orange surface (Hassuna?). Fairly dense, well-fired, no black core visible on the section. White small inclusions, some veg. Ext. surface color is light red slip. Paint is dark red color.

F. KM 8. d:unknown. Red wash on the outer surface. Inner surface is grey brown. Core is grey black. Fairly dense, medium fired, black core. Grit temper and some veg. (partly preserved reddish wash on the ext. surface).

G. KM 8. d:unknown. Amuq A. Fairly dense, medium fired, black core. Grits and white inclusions, buff color paste, dark reddish wash.

H. KM 8. d:unknown. Amuq A. (washed impressed ware). Outer surface brick red, more pale fabric and inner surface grit tempered. Red wash on the ext. surface.

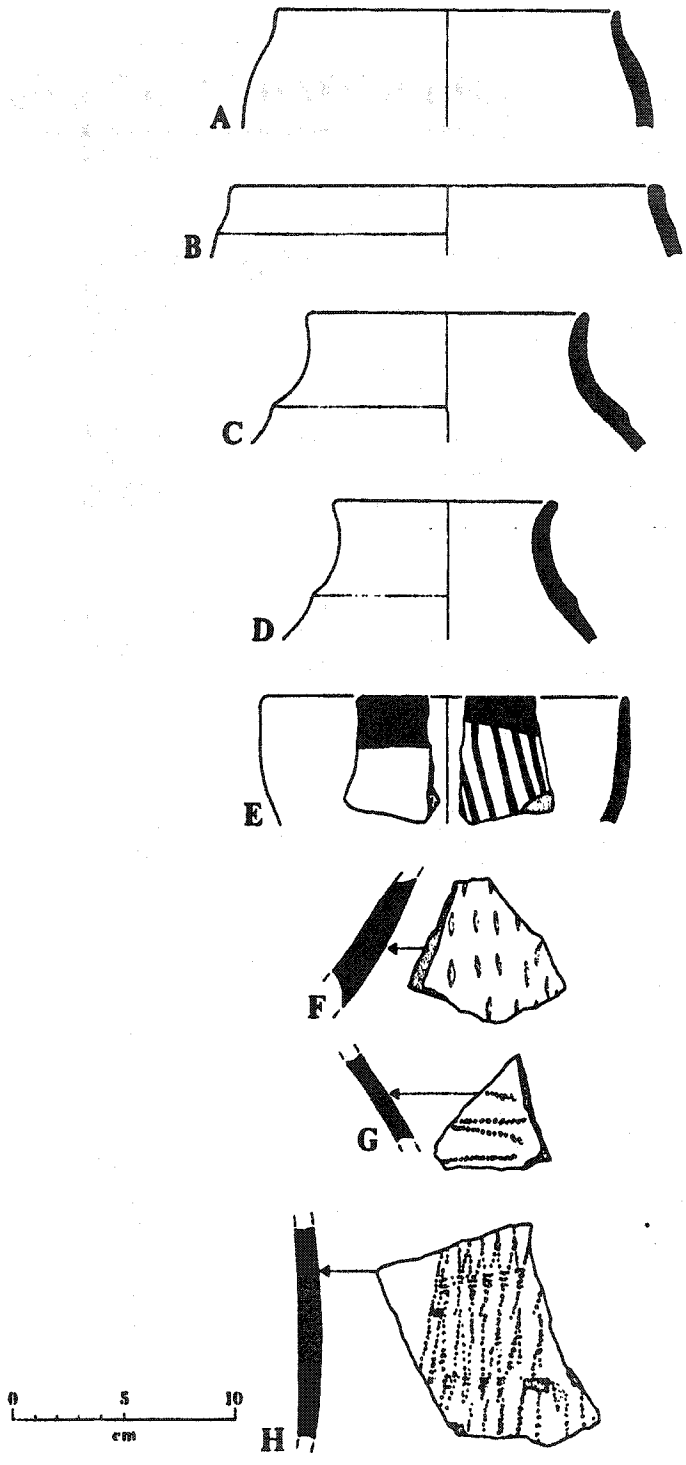

A
B
C
D
E
F
G
H
0
5
10
cm

Fig.B.2.h. Burnished Ceramics of KM 125

A. KM 125/107. d:240 mm. Dull brown burnished.

B. KM 125/106. d:unknown. Dull brown burnished.

C. KM 125/600. d:150 mm.

D. KM 125/104. d:130 mm. Brown burnished.

E. KM 125/103. d:260 mm. Black burnished.

F. KM 125/602. d:230 mm. Early brown burnished.

G. KM 125/105. d:260 mm. Brown burnished.

H. KM 125/113. d:unknown. Black burnished.

I. KM 125/114. d:150 mm. Burnished

J. KM 125/112. d:130 mm. Red shelly burnished.

K. KM 125/115. d:unknown. Brown burnished.

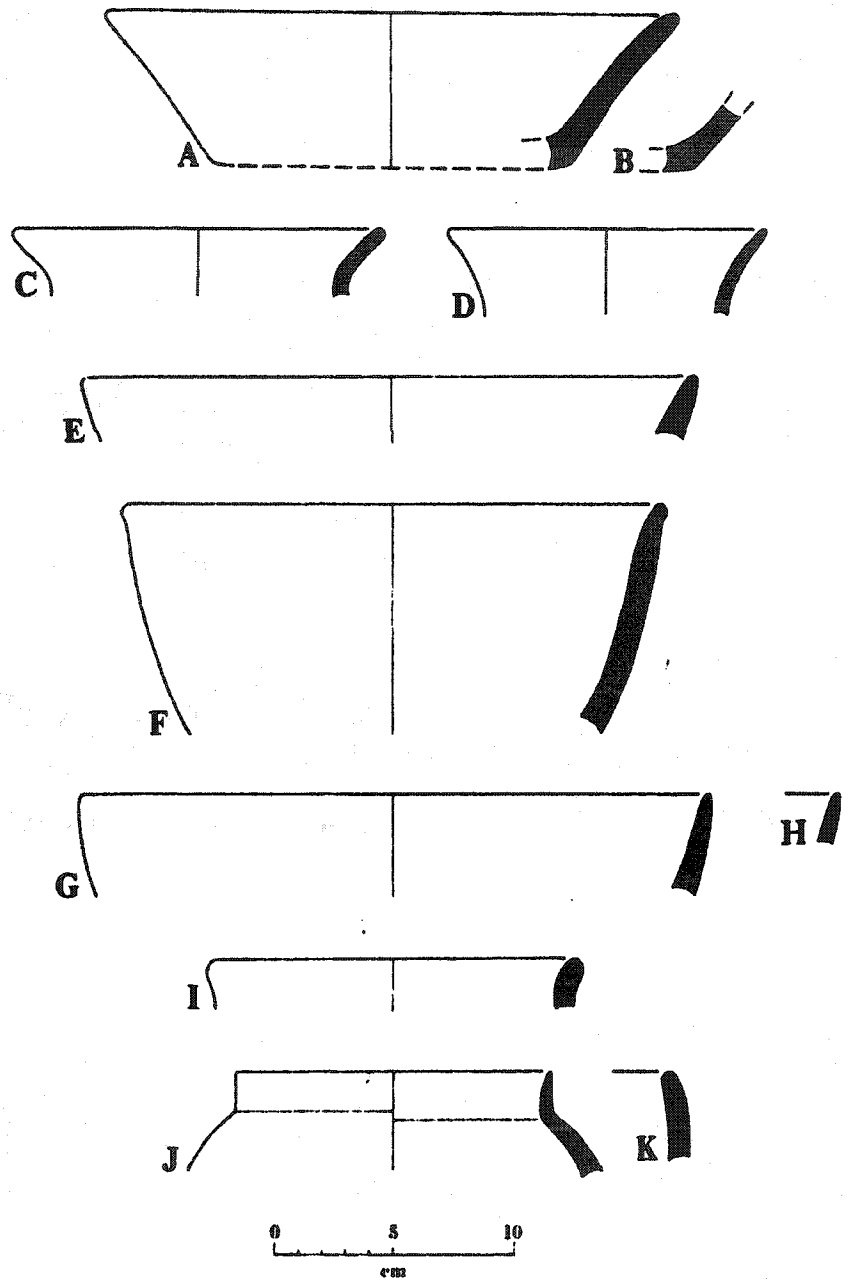

A
B
C
D
E
F
G
H
I
J
K
0
5
10

Fig.B.2.i. Burnished Ceramics of KM 67

A. KM 67/637. d:140 mm. Burnished

B. KM 67/604. D27-10. d:125 mm. Orange red burnished.

C. KM 67/609. D27-10. d:165 mm. Lighter red/ or burnish.

D. KM 67/602. D27-09. d: 195 mm. Red/brown burnish.

E. KM 67/631. d:160 mm. Burnished

F. KM 67/600. D27-10. d:175 mm. Red burnished.

G. KM 67/219. d:215 mm.

H. KM 67/601. d: 195 mm. Burnished

I. KM 67/605. D27-09. d:250 mm. Red burnished.

J. KM 67/607. D27-09. d:240 mm. Red/brown burnished.

K. KM 67/639. d:195 mm. Burnished

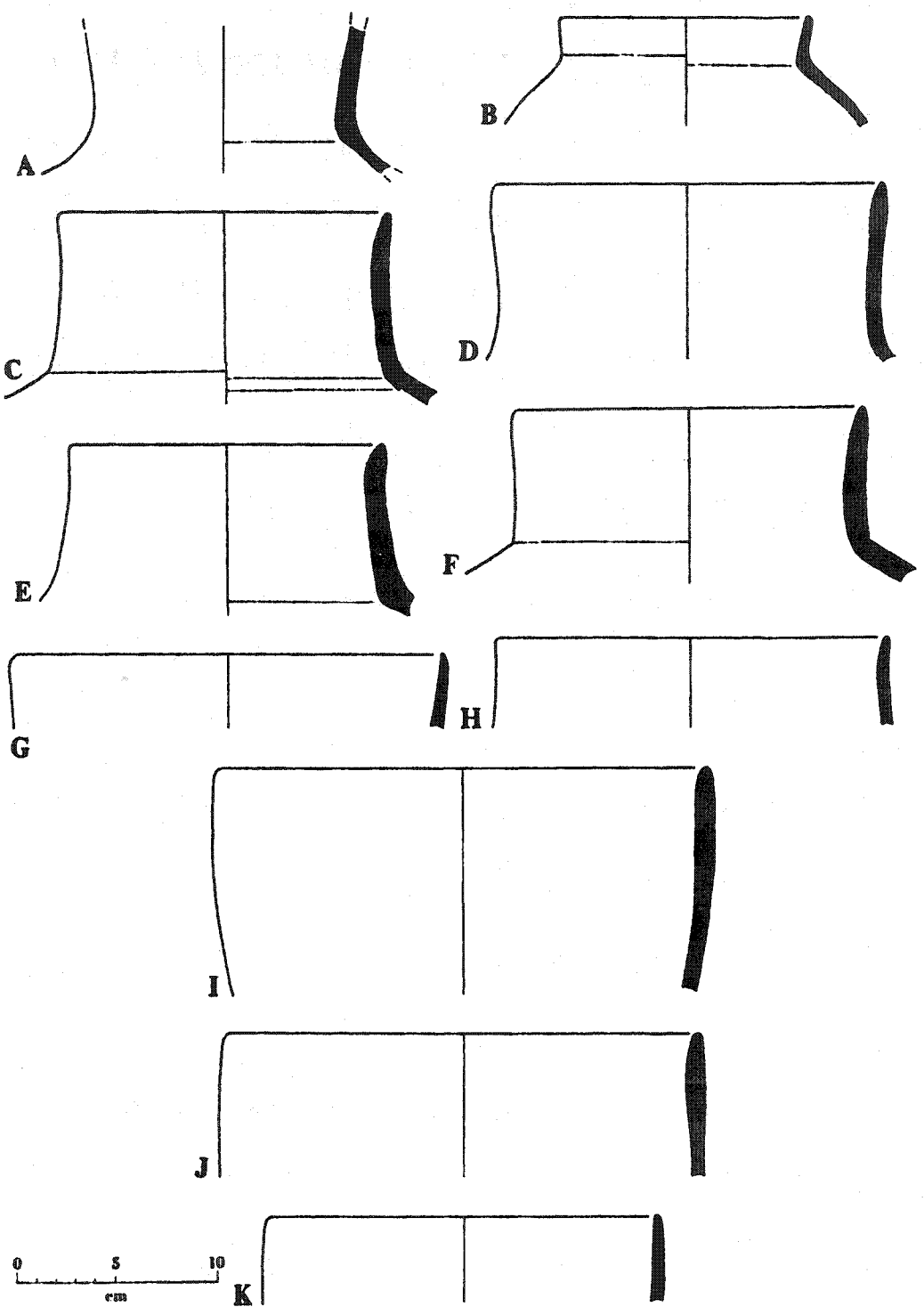
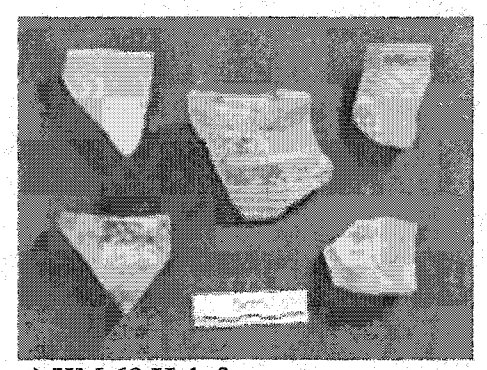
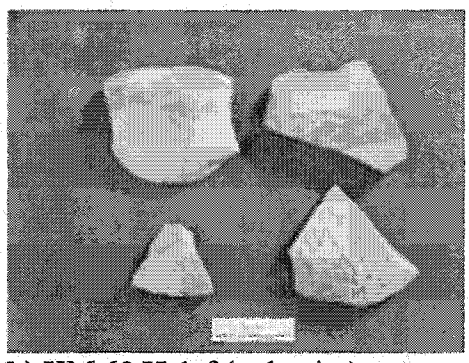

A
B
C
D
E
F
G
H
I
J
K
0
5
10
cm

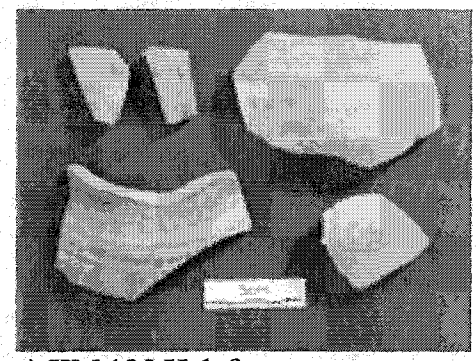
Fig. B.3. 6th millennium Ceramics from KM Survey



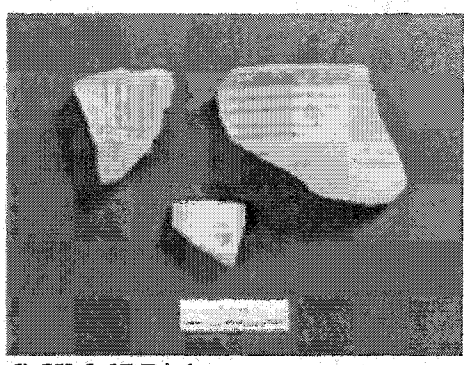
a) KM 69 Halaf



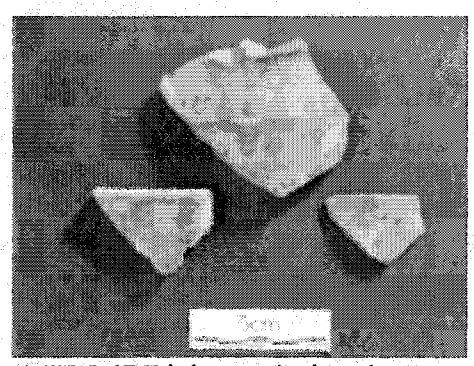
b) KM 69 Halaf (red paint)



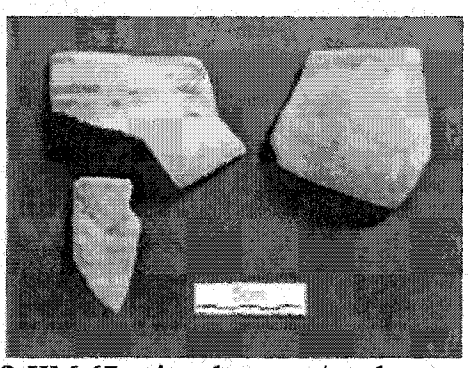
c) KM 125 Halaf



d) KM 67 Bichrome



e) KM 67 Bichrome/painted orange



f) KM 67 painted orange/wash

Fig.B.4. (a-c) Halaf Ceramics

Fig.B.4.a.

A. KM 69/621, 622. d:210 mm. Halaf red paint interior, brown burnished. 622-Creamy surface, orange core. 621-brown paint on exterior. Yellow/orange surface.

B. KM 69/616. d:230 mm. Halaf, orange pink surface. Red/brown paint.

C. KM 69/640. d:180 mm. Brown paint on Halaf fabric.

D. KM 69/641. d:260 mm. Halaf? Brown paint on exterior. Interior is blacker.

E. KM 69/617. d:250 mm. Halaf. Red painted on the exterior. Interior rim: brown/black paint. Surface is yellow orange.

F. KM 69/638. Rim diameter:180 mm. Diameter at neck: 180 mm. Halaf. Brown/black paint.

G. KM 69/637. d:100 mm. Halaf. Brown paint.

H. KM 69/642. d:110 mm. Halaf pink/yellow. Pink core.

I. KM 69/623. d:unknown. Red painted Halaf.

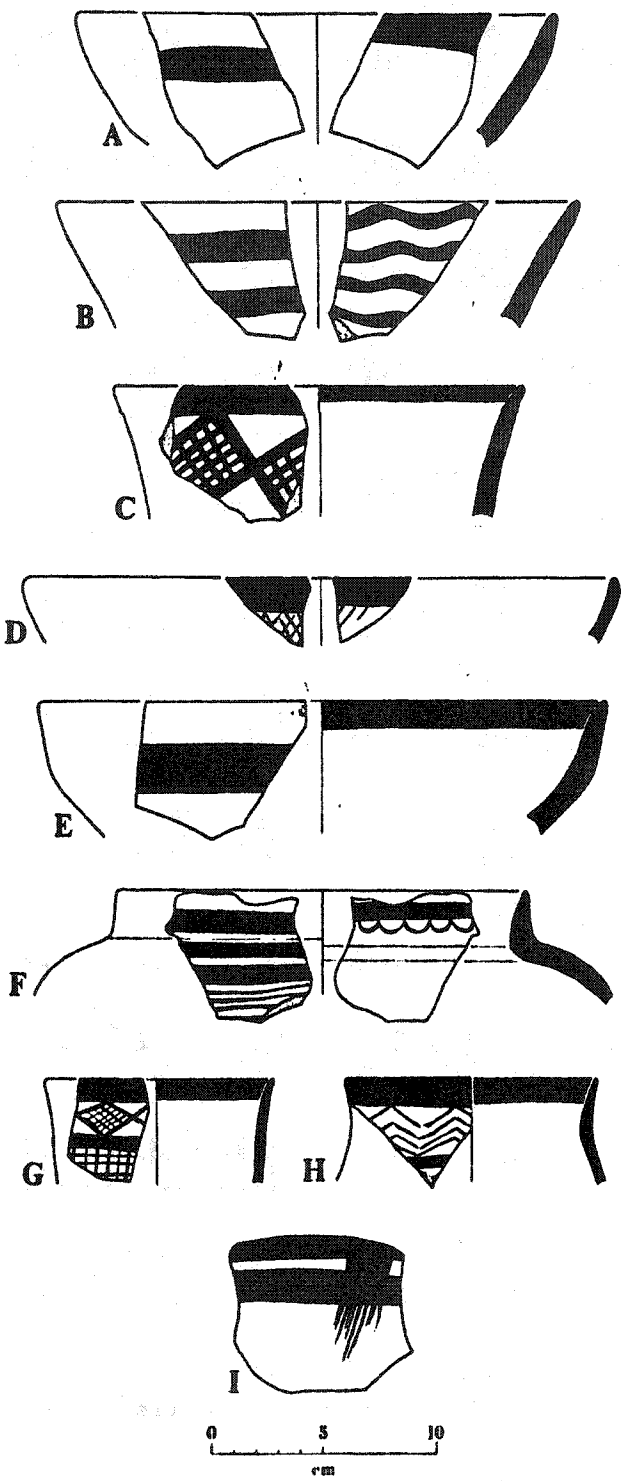

A
B
C
D
E
F
G
H
I
0
5
10
cm

Fig.B.4.b.

A. KM 69/18. d:unknown. Pattern burnished.

B. KM 69/17. d:340 mm. Painted Halaf. Orange surface, black to brown paint.

C. KM 69 /6. d:320 mm. Halaf

D. KM 69/3. d:unknown. Halaf

E. KM 69/2. d:155 mm. Halaf. Orange surface, black to brown paint.

F. KM 69/19. d:unknown. Halaf

G. KM 69/14. d:360 mm. Halaf

H. KM 69/15. d:190 mm. Painted Halaf. Orange surface, black to brown paint.

I. KM 69/4. d:140 mm. Halaf

J. KM 69/5. d:110 mm. Painted Halaf. Orange surface, black to brown paint.

K. KM 69/11. d:145 mm. Buff slip interior and exterior. Interior: light red paint. Exterior: yellowish red paint. Little micacious temper.

L. KM 69/20. d:unknown. Halaf

M. KM 69/10. d:205 mm. Brown core, red ware. Little visible temper. Red/orange slip. Int: brown painted. Ext: red painted.

N. KM 69/7. d:unknown. Halaf

O. KM 69 v/1. d:unknown. Halaf

P. KM 69/16. d:unknown. Halaf

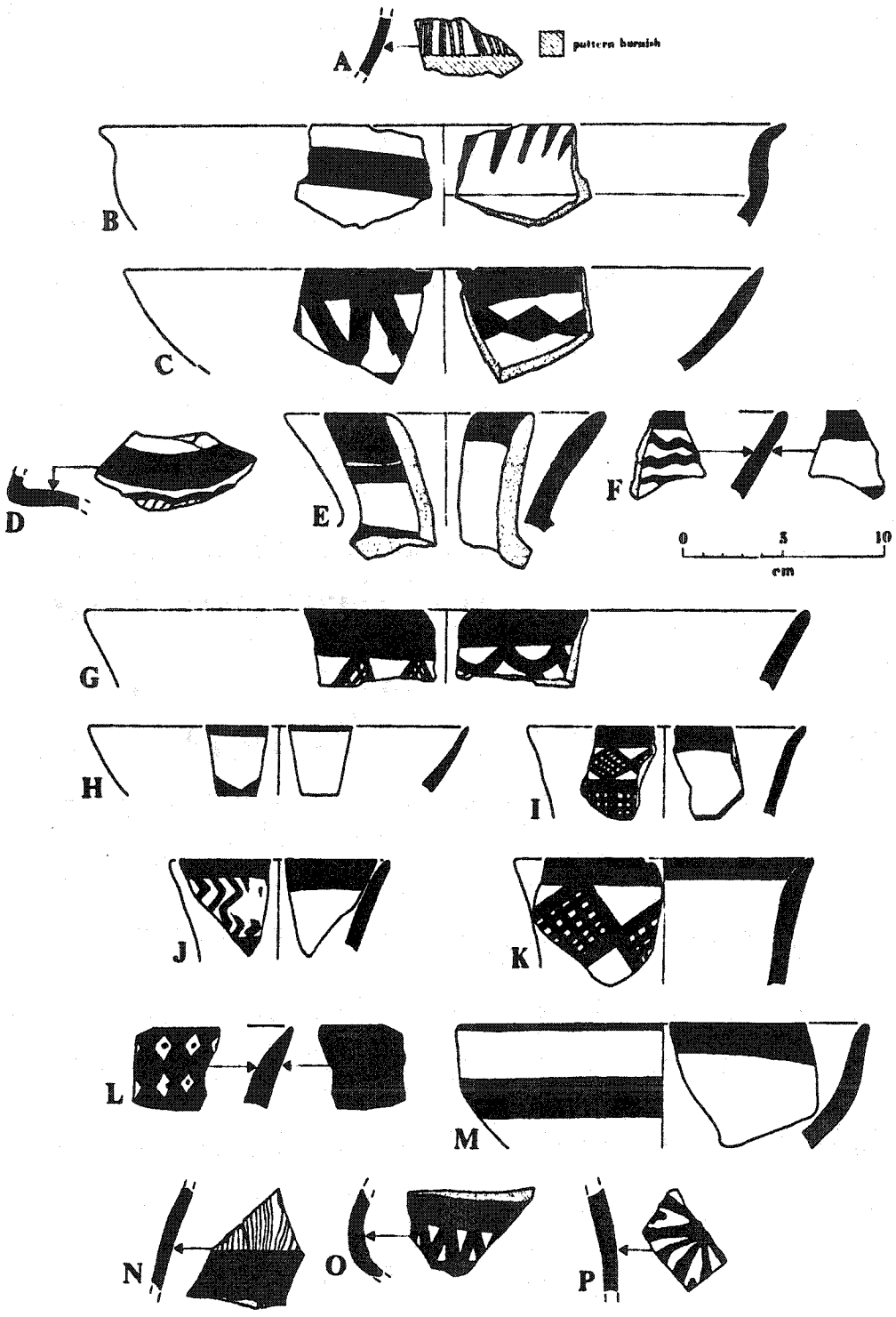

A
pattern burnish
B
C
D
E
F
0
5
10
cm
G
H
I
J
K
L
M
N
O
P

Fig.B.4.c.

A. KM 125/505, 506. d:260 mm. Orangish with dark paint. White inclusions, well fired.

B. KM 125/111. D27-55 2nd. d:200 mm. Painted Halaf.

C. KM 125/501. d:200 mm. Scrappy brown paint. Light orange, buff, well fired.

D. KM 125/504. d:90 mm. Light creamy. Orange buff with red. Dark brown paint, dense white inclusions, well fired.

E. KM 125/110. d:100 mm measured at the neck. Painted Halaf. Orange surface, black to brown paint.

F. KM 125/108. Base diameter:75 mm.

G. KM 125/500. d:155 mm. Orange buff. Very dark black paint, dense white inclusions.

H. KM 125/502. d:unknown. Orange buff with light brown paint. White and some black inclusions. Reddish core, well fired.

I. KM 125/109. d:unknown. Halaf, red paint.

J. KM 125/503. d:unknown. Ubaid shape? Orange buff with white mineral inclusions. Well fired, light brown paint.

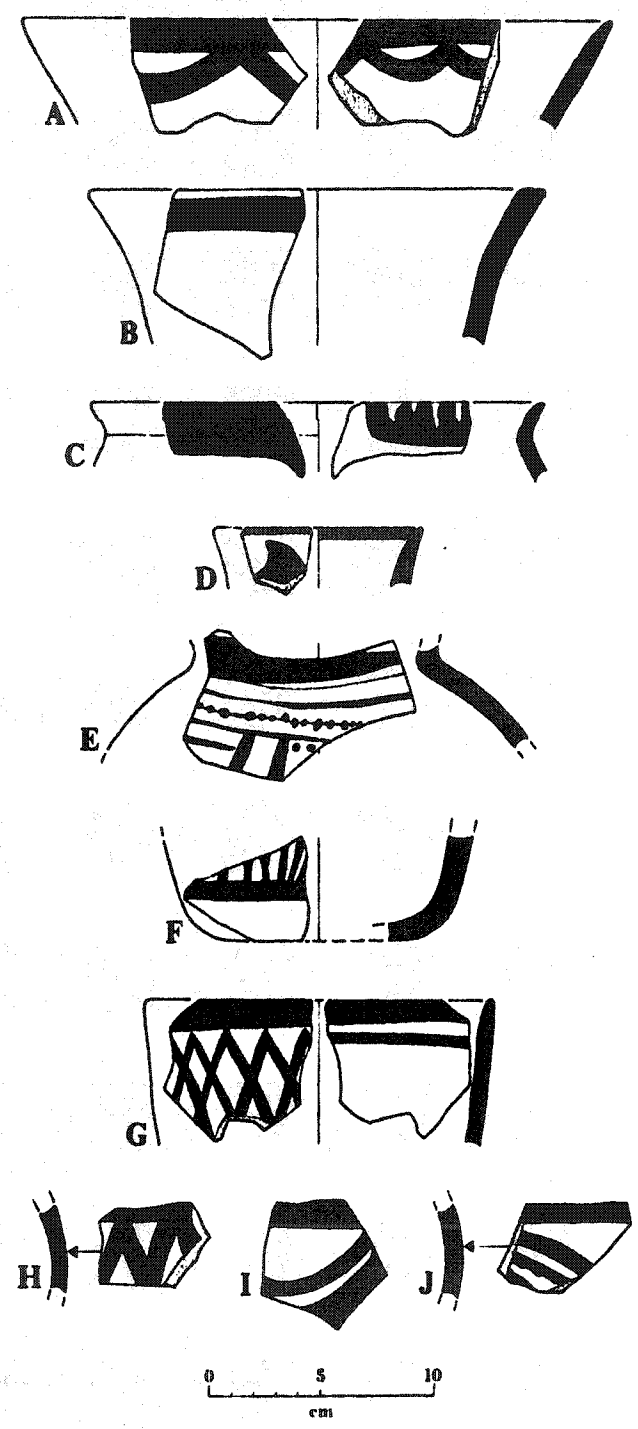

A
B
C
D
E
F
G
H
I
J
0
5
10
cm

Fig.B.5. (a-d) Halaf/Ubaid Transitional

Fig.B.5.a.

A. KM 67/622. d:190 mm. Orange wash, reddish paint.

B. KM 67/626. D26-98/3. d:100 mm. Orange wash, black paint.

C. KM 67/629. d:280 mm. Orange wash on gritty Halaf fabric. Red/black paint.

D. KM 67/628. d:210 mm. Orange wash, black paint. Fabric: orange/pink buff (Halaf). Yellow/grey core. Incisions.

E. KM 67/621. D26-98/1. d:unknown. Orange wash, black paint. Interior surface is yellow buff.

F. KM 67/624. d:unknown. Darker orange wash/painted orange.

G. KM 67/623. d:unknown. Paint on the rim. Orange wash on the exterior. Interior reddish paint, red/black.

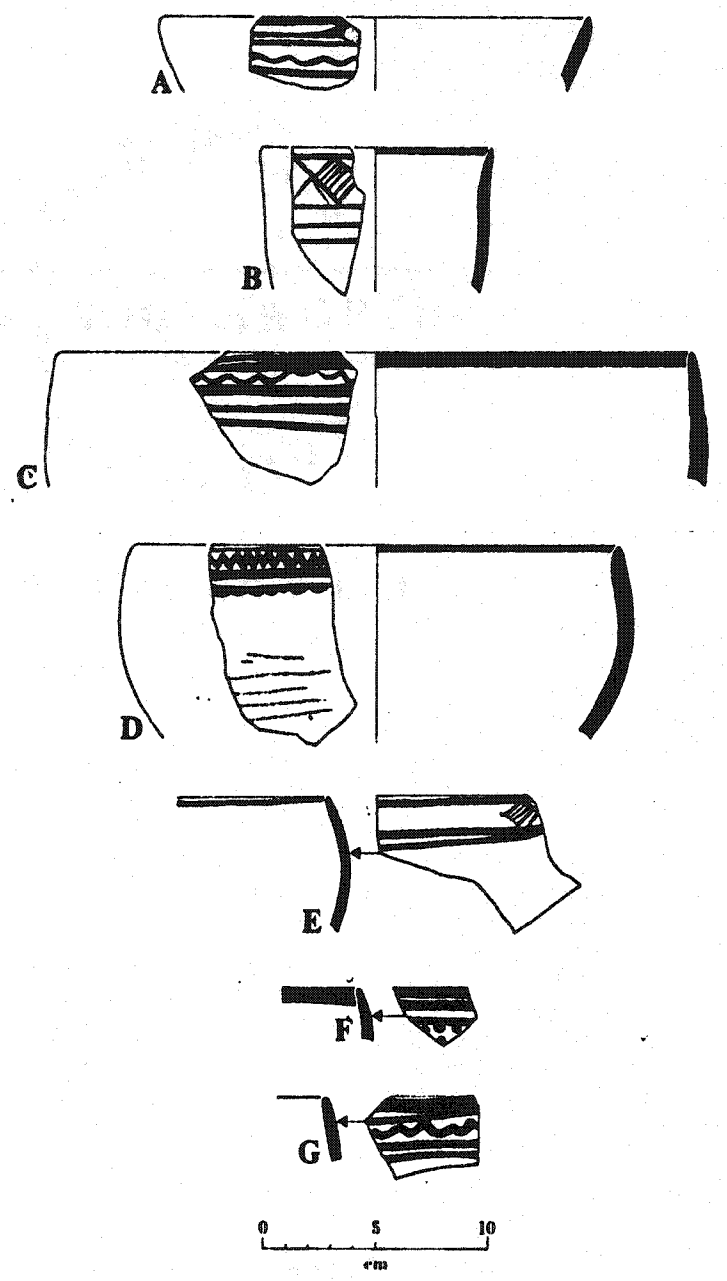

A
B
C
D
E
F
G
0
5
10

Fig.B.5.b.

A. KM 67/7. d:220 mm. bichrome

B. KM 67/11. d:205 mm. Bichrome. Dark orange brown surface. Well fired, pale pink buff surface. Temper not visible.

C. KM 67/5. d:201 mm. Grit temper, brown paint partly red, partly brown due to firing.

D. KM 67/12. d:180 mm. Monochrome, on pale creamy surface

E. KM 67/8. d:160 mm. Monochrome, on orange washed surface

F. KM 67/4. d:unknown. Pinky buff (pale) charcoal like paint. Fine sand grits, well fired.

G. KM 67/10. d:240 mm. Bichrome, very pale creamy surface (red brown?). Well fired, fine grit.

H. KM 67/9. d:160 mm. Bichrome. Red/orange around dots. Black in surrounding. Inner surface brick-red with grit inclusions. Grey core.

I. KM 67/3. d:unknown. Black-brown paint, buff surface, compact firing.

J. KM 67/small find 2. pierced pendant (formerly piece of a pot?)

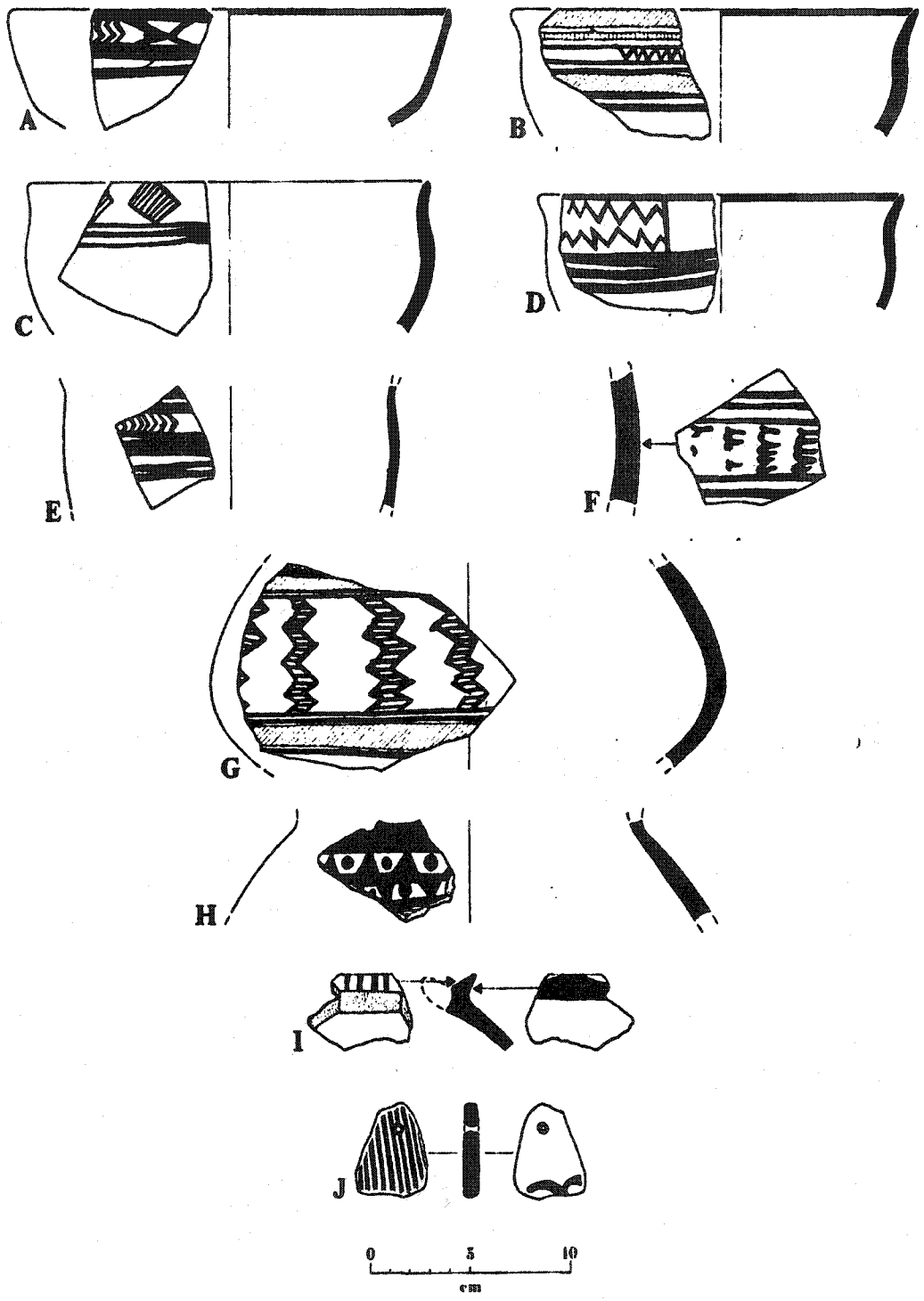

A
B
C
D
E
F
G
H
I
J
0
5
10
cm

Fig.B.5.c.

A. KM 69/615. d:unknown. Neolithic style Red/brown burnished. Much less thick than earlier KM 8 burnishes, raised rim, more pointy and finely defined.

B. KM 69/627. d:160 mm. Northern Ubaid. Solid paint, brown/black.

C. KM 69/626. d:unknown. N. Ubaid, monochrome brown paint

D. KM 69/625. d:120 mm. N. Ubaid. Brown paint.

E. KM 69/613. d:130 mm. N. Ubaid. Yellowish surface , light brown paint.

F. KM 69/624. d:140 mm. N. Ubaid.

G. KM 69/639. d:unknown. Painted orange.

H. KM 69/643. d:160 mm. Painted orange. Red paint on brown orange/washy surface.

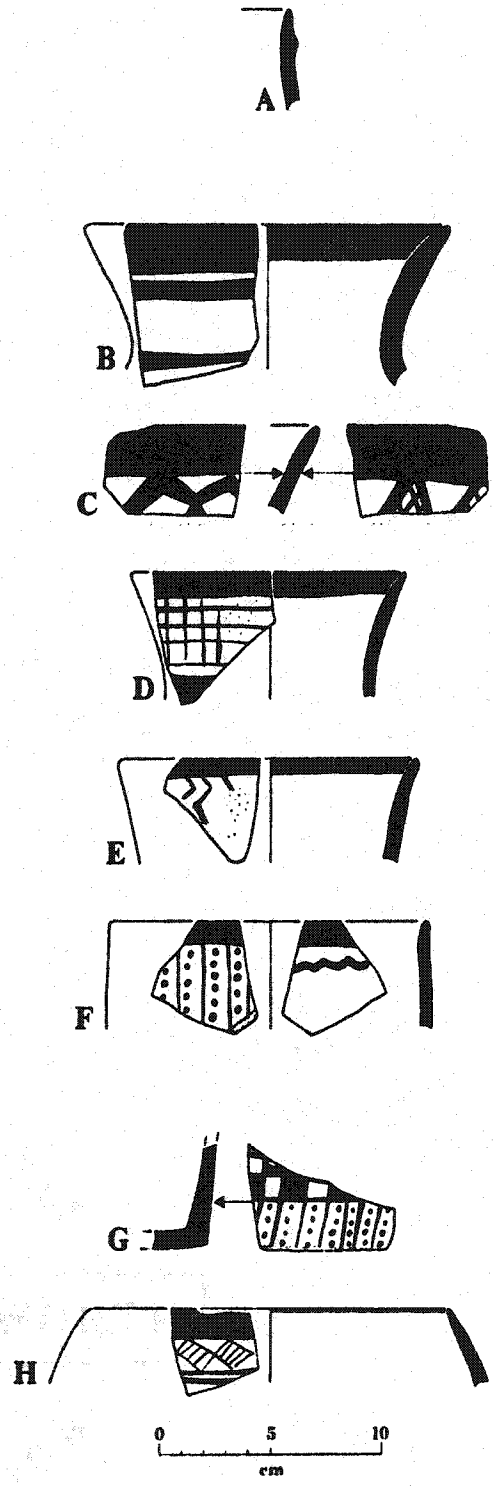

A
B
C
D
E
F
G
H
0
5
10
cm

Fig.B.5.d.

A. KM 96/622.d:140 mm. Halaf style (transitional?). Pink core. Orange buff surface. Interior rim painted.

B. KM 96/500. Diameter at neck:185 mm. Yellowy-cream orange, some white inclusions, well fired, dark paint (brown).

C. KM 96/504. Rim diameter:150 mm. Diameter at neck: 145 mm. Pinky-buff. Dark paint, white inclusions, well fired.

D. KM 96/502. d:155 mm. Grey-yellow with dark paint (brown). Well fired, fine grits.

E. KM 96/608. D26-62/1. d:180 mm. Bichrome, black and red paint.

F. KM 96/605. D26-65/1. d:190 mm. Classic Ubaid. Greenish-yellow. No grey core.

G. KM 96/501. d:190. Bichrome: yellow-green tint. Dark paint with red brown lower line. Fine grits, well fired.

H. KM 96/503. d:250 mm. Dirty green tint, dark black paint, dirty buff core. Well fired.

I. KM 96/603. D26-72/1. Ubaid. White surface (wash?). Slightly raised rim band.

J. KM 96/615. D26-70/2. d:unknown. Orange wash, brown paint. Green tint/yellow fabric.

K. KM 96/209. D26-72/2nd. d:unknown. Ubaid, white surface/creamy yellow fabric.

L. KM 96/616. D26-70/3. d:unknown. Orange wash.

M. KM 96/611, 607. D26-62/2, 4. d:unknown. Bichrome: brown and red.

N. KM 96/604. d:unknown. Classic Ubaid.

O. KM 96/617. d:unknown. Orange wash on yellow fabric, black paint.

P. KM 96/601. d:unknown. White surface, brown paint. Yellowy surface fabric (non rim).

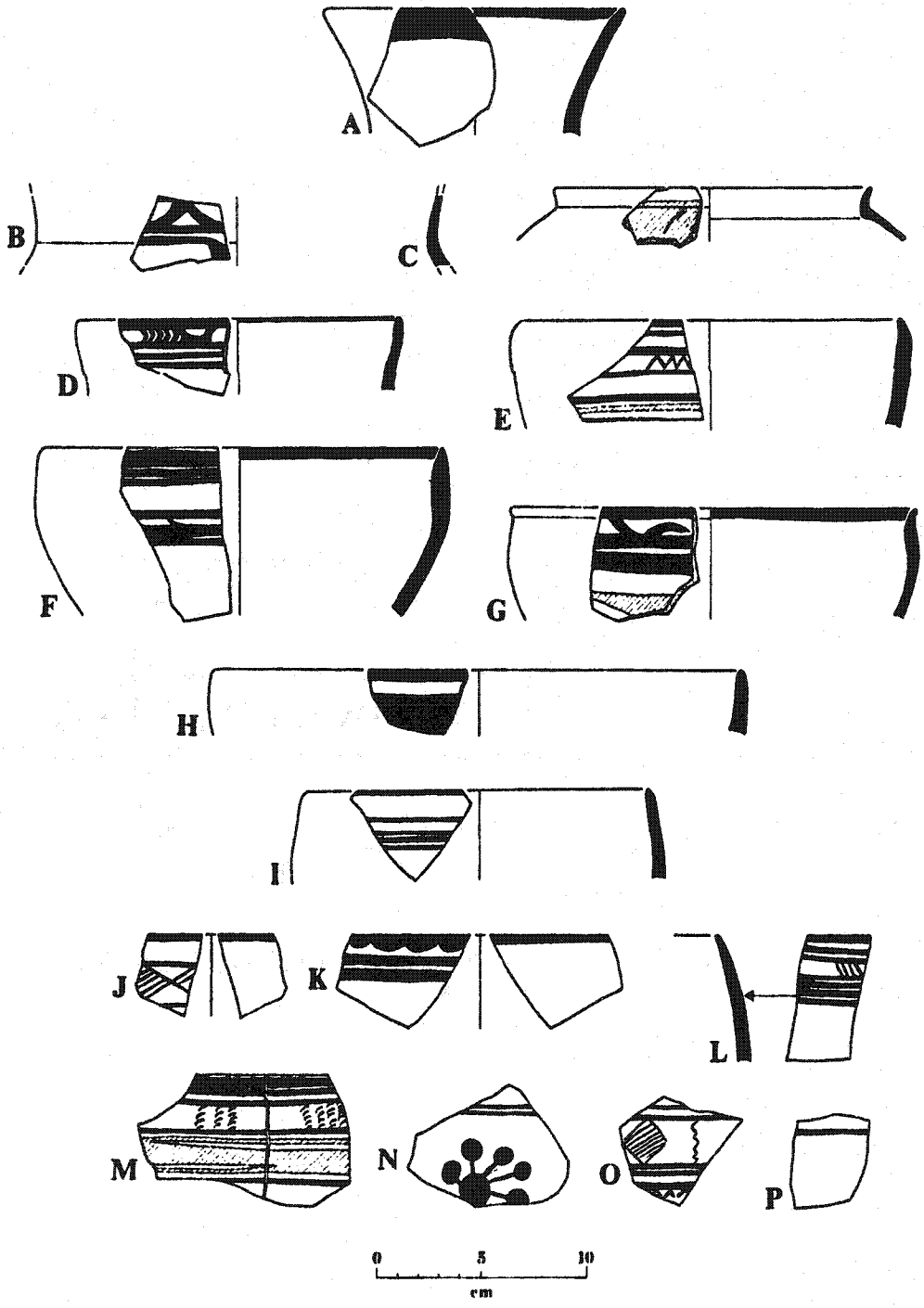
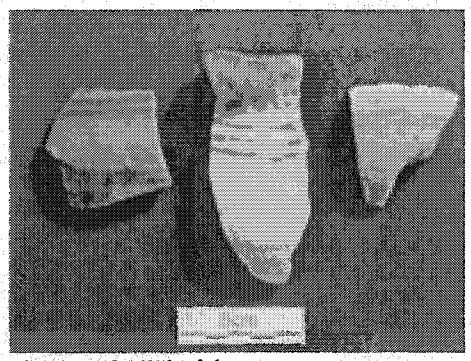
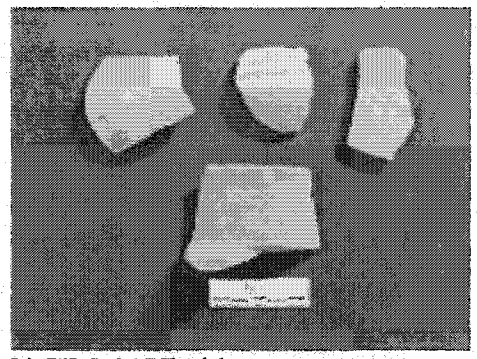

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
0
5
10
cm

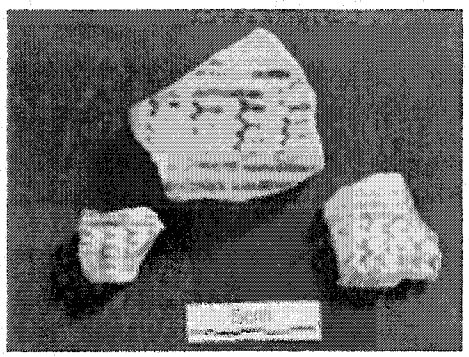
Fig.B.6. Ubaid Ceramics (late 6th through 5th millennium)



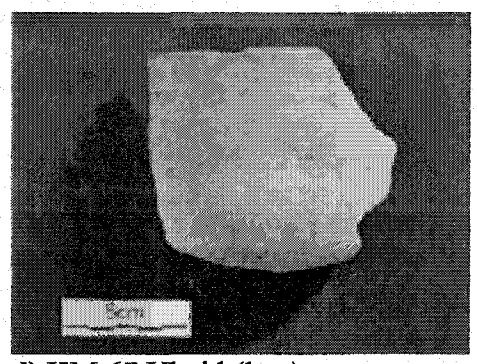
a) KM 67 Ubaid



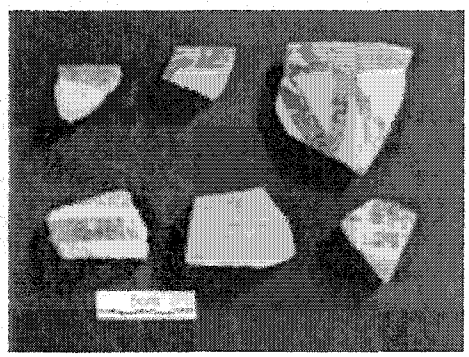
b) KM 67 Ubaid



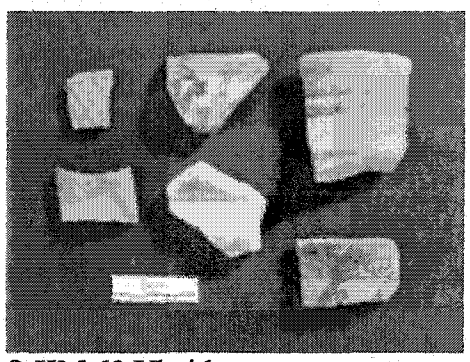
c) KM 67 Ubaid



d) KM 67 Ubaid (late)



e) KM 69 Ubaid



f) KM 69 Ubaid

Fig. B.7. (a-b) Ubaid Ceramics of the KM Survey Region

Fig.B.7.a.

A. KM 96/600. d:195 mm. Light brown burnished. White grits.

B. KM 96/502. general late 6^{th} millennium. d:unknown.

C. KM 96/624. Base diameter:110 mm.

D. KM 96/620. d:180 mm. Ubaid, unpainted.

E. KM 96/623. d:140 mm. Orange wash/Ubaid shape unpainted.

F. KM 96/606. d:180 mm. Classic Ubaid, unpainted.

G. KM 96/618. Diameter at neck:100 mm. Unpainted.

H. KM 96/619. d:195 mm. Grey core, unpainted.

I. KM 96/607. d:180 mm. Classic Ubaid, unpainted.

J. KM 96/602. d:150 mm. Unpainted Ubaid.

K. KM 96/519. d:unknown. Unpainted Ubaid.

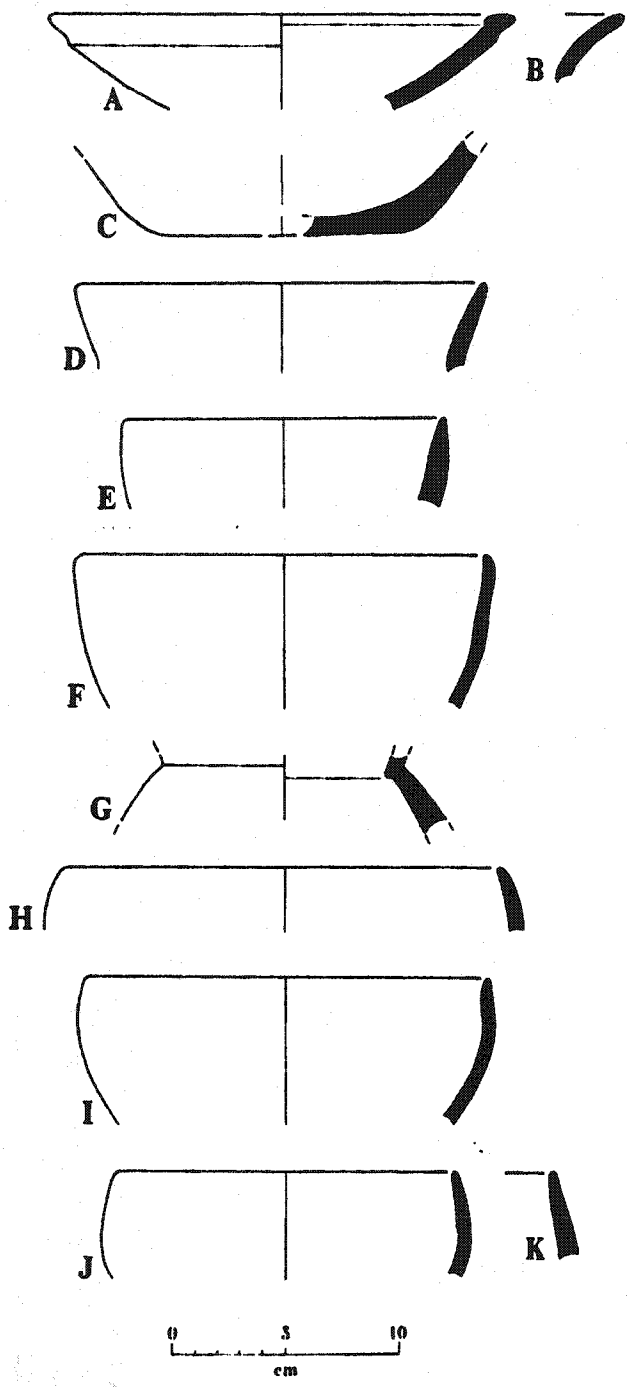

A
B
C
D
E
F
G
H
I
J
K
0
5
10
cm

Fig.B.7.b.

A. KM 87/8. d:160 mm. Ubaid? Green tint and buff, dark paint, green core, grit and veg not very dense.

B. KM 87/12. d:unknown. Ubaid? Pink/orange with dark brown paint. Grey core, veg and white inclusions.

C. KM 87/13. d:210 mm. Yellowish cream, brown paint. Pinkier core, dense veg temper.

D. KM 87/15. d:160 mm. Buff with pinky tint. Black paint, well fired, no inclusions visible.

E. KM 87/60. d:165 mm. Cream buff with brown paint, well fired, no inclusions visible.

F. KM 87/11. d:170 mm. Buff with pink tint. Dark-brown paint, veg and white inclusions. Well fired.

G. KM 133/450. d:130 mm. Transitional bichrome. Pale orange surface, green/grey core, fairly dense, fine dark grits.

H. KM 133/454. d:unknown. Reddish interior. Paler exterior (whitish). Dark brown/red paint. Grey core, white inclusions, Ubaid.

I. KM 133/1000. d:unknown. Ubaid? Yellow creamy, mocha paint, med.density mineral. Well fired.

J. KM 133/1002. d:unknown. Incised. Late Halaf to transitional.

K. KM 133/1003. d:unknown. Incised, grey yellow. Med/high density. Dark grey core. Could be anywhere from Neolithic to Hal/Ubaid transitional.

L. KM 133/455. d:120 mm. Yellow/creamy with purple brown paint. Well fired, dark buff fabric/grey core. White inclusions. Transitional?

M. KM 133/451. d:140 mm. Impressed. Ubaid? Pale orange buff. Greyish core, white and veg inclusions.

N. KM 133/1001. d:unknown. Greenish yellow. Dark paint (very brown black). Light grey core. Dark, fine inclusions.

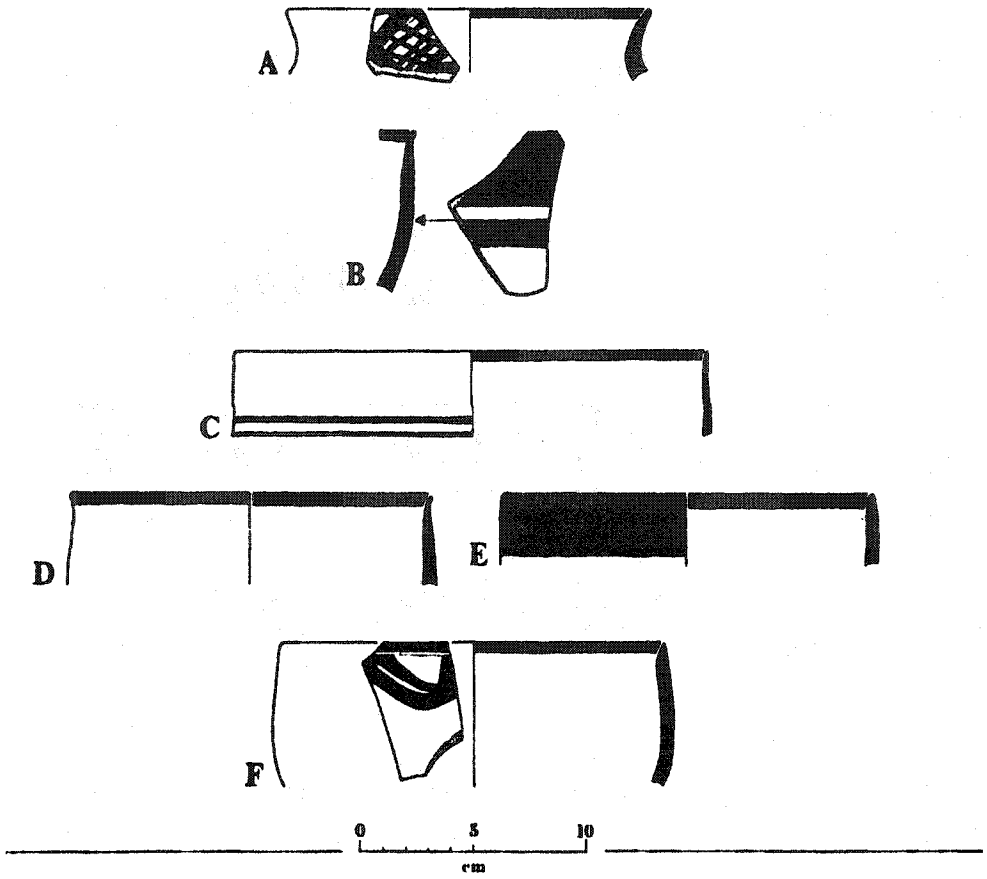

A
B
C
D
E
F
0
5
10
cm
G
H
I
J
K
L
M
N
concretion

Fig.B.8. (a-b) Miscellaneous

Fig.B.8.a

A. KM 120/88. Diameter at neck:90 mm. Red film-like burnish on the exterior. Orangy buff fabric, well fired, no inclusions visible. (some fine white inclusions). Bow rim? Transitional Ubaid.

B. KM 9/8. d:270 mm. Bunch of red wash sherds. Grey core and white inclusions. Brown to dark brown to black burnish lines. Similar to KM 8. Neolithic.

C. KM 110/2. Rim diameter:130 mm. Diameter at neck:133 mm. Neolithic.

D. KM 10/501. d:280 mm. Ubaid. Cream buff. Slight pink tint, dark paint, medium dense. Some veg and grit inclusions. Well fired.

E. KM 10/500. d:275 mm. Ubaid. Yellowish buff with red brown paint. Well fired. Medium dense.

F. KM 91/14. d:150 mm. Orange buff with chocolate brown paint on the exterior. Red/brown paint on the interior. Dense/white inclusions, well fired.

G. KM 56/501. d:220. Ubaid. Yellowish buff with brown red paint on the exterior and top of rim. Well fired. Medium dense.

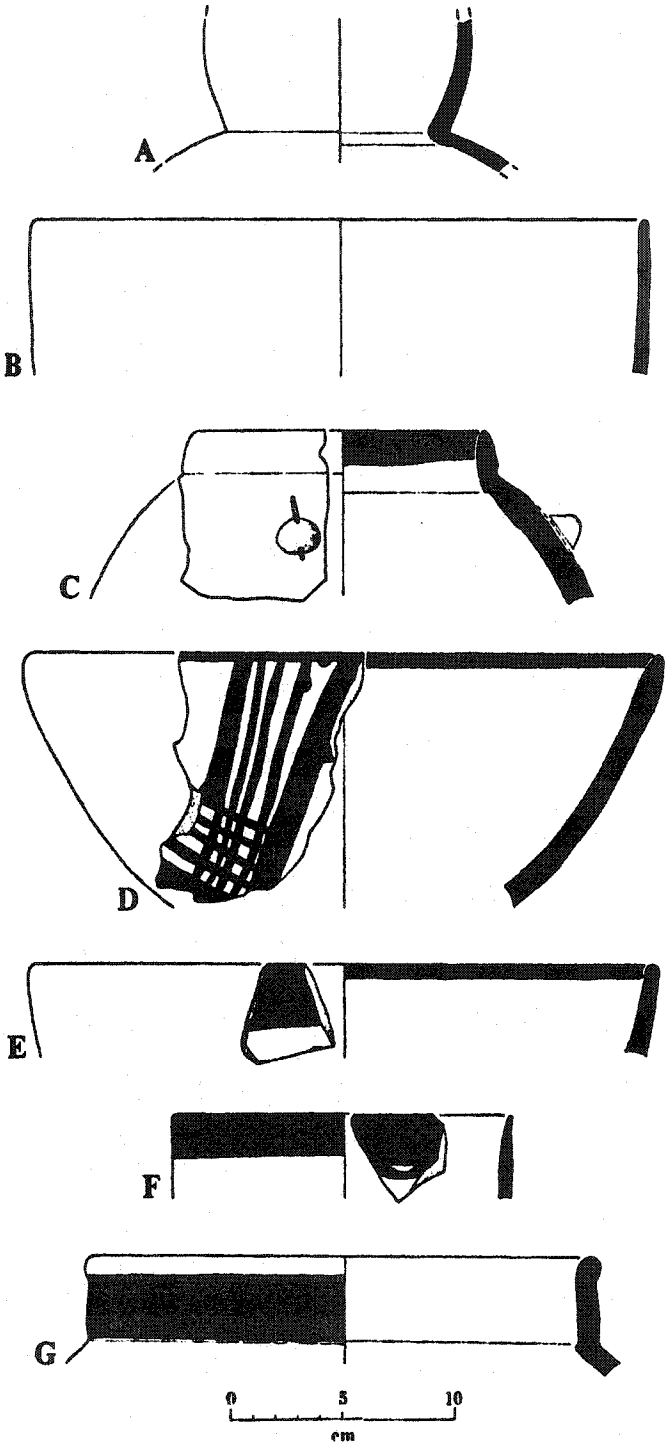

A
B
C
D
E
F
G
0
5
10
cm

Fig.B.8.b

A. KM 211/1. d:unknown.

B. KM 214/500. d:unknown. Pale green with black/brown paint. Well fired. Fine silty inclusions. Ubaid.

C. KM 45/291 (?). d:unknown. Bichrome. Orangy surface, grey core, very fine grit.

D. KM 9. d:unknown. Ubaid?

E. KM 56/500. d:unknown. Ubaid. Yellowish with very slight greenish tint. Med/high density with dark paint. Fine dark grit inclusions, well fired.

F. KM 91/12. d:unknown. Interior fabric and surface orangy. Red brown paint. Orangy outer surface smoothed. Red, white, dark inclusions.

G. KM 91/500. d:unknown. Yellowish, creamy buff. Well fired, dark black paint, no inclusions visible.

H. KM 189/216. d:unknown. Orangy buff with reddish/brown paint, no inclusions visible, well fired.

I. KM 68/151. d:unknown. Orangy buff with purply brown paint. Red, black, inclusions, well fired.

J. KM 49/500. d:unknown. Ubaid. Yellowy buff with dark brown paint. Very fine white inclusions, well fired.

K. KM 68/26. d:unknown. Transitional or Ubaid. Yellowy, creamy buff. Grey core/red-black inclusions. Purple brown paint.

L. KM 45/46. d:unknown. Grey buff with light brown paint, well fired.

M. KM 71/31. d:unknown. 6^{th} millenium. Buff, grey core, dark paint, white incl.

N. KM 4/500. d:unknown. Ubaid. Dirty yellow. Dark paint, red and black. Few inclusions. High medium dense, well fired.

O. KM 88/469. d:unknown. Ubaid. Surface and fabric greenish grey. White inclusions/other fine minerals. Dark paint, black, well fired.

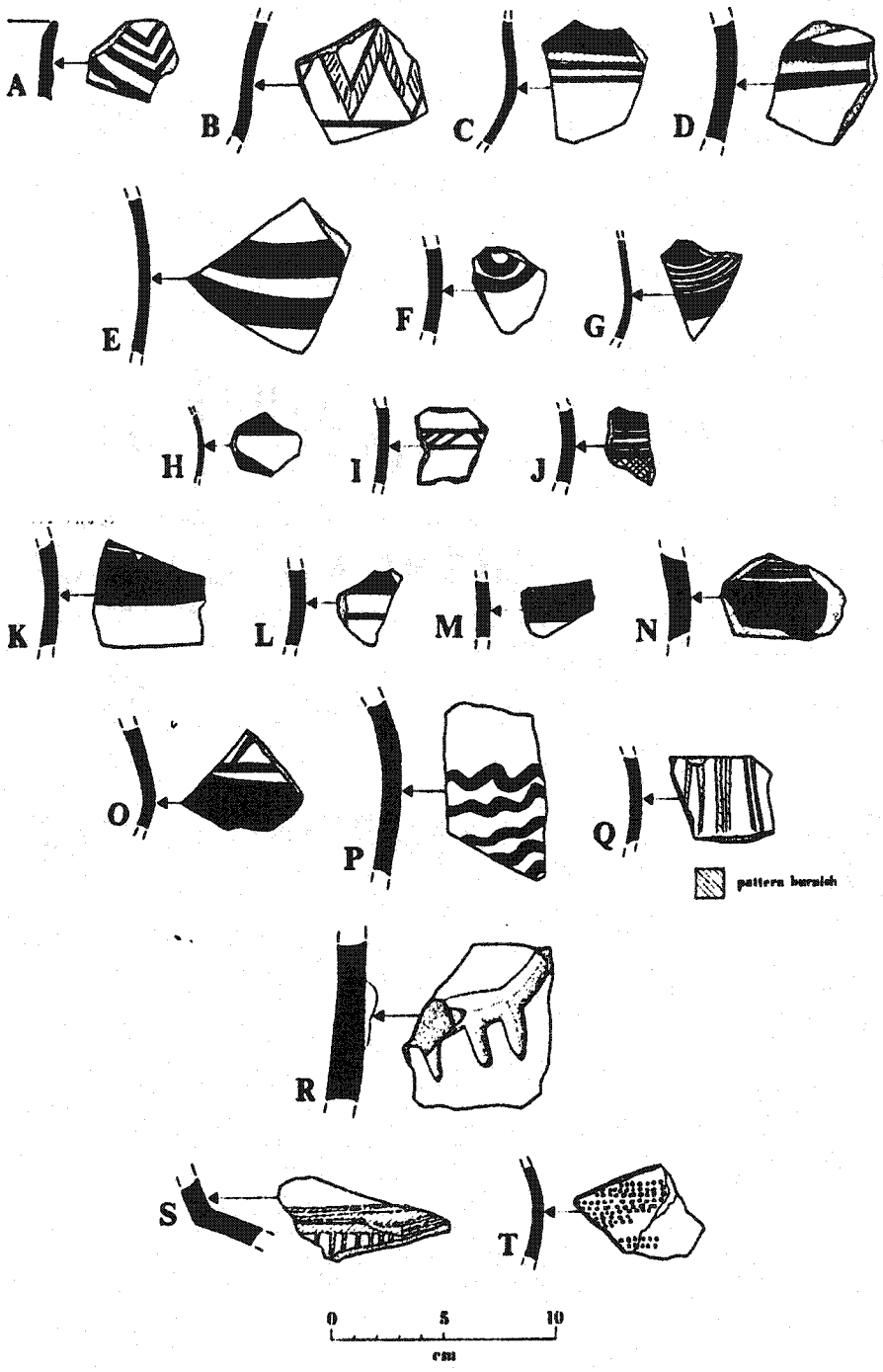
P. KM 211/2. d:unknown.

Q. KM 88/366. d:unknown. Pattern burnished. Brown surface with dark brown burnished lines. Fairly dense fabric. Fine mineral inclusions. Green tinted grey. Not well fired.

R. KM 110/1. d:unknown. Early to mid 7th millennium BC.

S. KM 210/500. d:unknown. Buff pink/orange with red brown paint. Medium-high dense, well fired. Halaf.

T. KM 9/5. d:unknown. Red wash, grey core, white inclusions. Neolithic.


A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
pattern burnish
R
S
T
0
5
10
cm

Appendix C

Exploitation Territory around Domuztepe

Site catchment is a method which estimates the number of people that would have been supported by carrying capacity of land surrounding the settlement. According to the types of land present within a defined diameter around the settlement, the method also provides clues for strategies of subsistence that may have been employed by the occupants of the site (Vita-Finzi and Higgs 1970, Jarman, Vita-Finzi and Higgs 1972). When studied in relation to patterns of settlement movement, continuity and abandonment in particular areas, site catchment may reveal techniques of land utilization.

Site catchment analysis is a frequently used tool to estimate populations or subsistence practices. However, its integration into archaeological interpretation has not been complete. The assumptions of the method may be one reason for why site catchment is and should be used cautiously. These assumptions are based on the movements and considerations of modern agricultural societies basically operating within a centralized market economy system (Chisholm 1962, Webley 1972, Higgs 1975). Much ethnographical and ethnoarchaeological research has been done in various areas to overcome some of the problems stemming from these assumptions (Foley 1977, Flannery 1976). However, at a very fundamental level the method is incapable of explaining why not all agriculturally viable locations have a site on them. Given that we have undifferentiated land conditions, it cannot explain why is it that certain locations grow in size or become continually occupied

while others in agriculturally similar locations are not. At a different level, it undermines the dynamic behaviour of populations (Roper 1979: 124, Dennell 1978), by assuming static site size persisting in a given locale. These are important questions undermining the basic assumptions of site catchment. They are inevitable to rise since the traditional assumptions undermine the greater depth of relationships between social formation and landscape.

The application of traditional site catchment methodology here asks that given the population which Domuztepe may have housed at its maximum size, would it have been possible for settlers to subsist on the produce from the surrounding land? Throughout the analysis it will become clear that carrying capacity calculation may estimate the maximum population that can be achieved at a site given that it was self sufficient. However, it can not explain why a similar pattern of growth did not take place in other areas. A 20 ha Halaf site is a very rare phenomena and any assumption regarding agricultural techniques, subsistence practices or input of "satellite" settlements should be taken very carefully. Introducing any of these elements would have a direct bearing on the discussion of complexity and centralized systems which are known to have taken place elsewhere during the 5th millennium.

Tony Wilkinson (1994) in his analysis of production territory and population for dry farming states of Northern Mesopotamia, sets out the basic variables which effect calculations regarding population estimates from carrying capacity of land:

the size of the territory (dependent on the radius chosen)

Mean crop yield (the yield in a poor year)

Available labor

Territorial radius may change in relation to the methods of exploitation and economic considerations of input-output. Distancing between settlement locations is one way of estimating radius of past land utilization. In practice, the land under assumed territories is never completely utilized. In 1967, before cash crops were intensively introduced and under incomplete drainage system, at any given time in southern valleys of Kahramanmarash 40% of land was left fallow. At this time, only 20% of agricultural production was done with aid of modern machinery, i.e 80% of land was still exploited with traditional methods. Although, half of the year passes by without a drop of rain, Kahramanmaras hardly experiences problems associated with dry conditions. On an average year, the southern valleys receive 650-700mm rainfall, which is more than plenty to subsist on a dry farming strategy. Again based on the 1967 conditions, grain production was recorded as 1367kg/ha for wheat and 1570kg/ha for barley.

Variables:

Radius: 1, 2, 3, 4, 5, 6 km

Crop yield: 500, 750, 1000, 1250, 1500 kg/ha-year (assuming various rainfall and soil conditions)

Consumption: 250kg/year-person

Fallow land: 40% of the total area

Population: 50-75-100 people/site ha

Harvest time: 2 months

Labor requirement: half the population, 3ha harvested/man-2months

The arable land around Domuztepe was estimated utilizing historical aerial photographs, maps and foot surveys. Within a hypothetical 5km radius around the site approximately 1/3 of the area can be cultivated for grain production. This makes 2600ha cultivable out of 7850ha total within 5km radius. Considering 40% of the area is left fallow, only 1560ha would have been effectively cultivated at any given year.

Crop yields can change in relation to rainfall and soil conditions, the following table provides a range for various conditions assuming 1560ha is cultivated:

500kg/ha-year x 1560ha = 780000kg/year

750kg/ha-year x 1560= 1170000

1000kg/ha-year x 1560= 1560000

1250kg/ha-year x 1560= 1950000

1500kg/ha-year x 1560= 2340000

If one person requires 250kg/year grain for consumption, these figures could feed populations ranging between 3000-9000 people. If 3 ha can be harvested by one man per 2 month harvest season, 1560ha would have required 520 people working to fully harvest. If we assume shorter harvest season, say 1month, obviously the labor requirement would be doubled to 1040 people to harvest.

Domuztepe is a 20 ha site and reconstruction of settlement history proves to be complex. Various studies give highly variable figures for estimating settled population per ha. Wilkinson's standard figure of 100p/ha is used here to give a hypothetical figure of 2000 people living on site at a given time assuming the site is fully occupied. Accordingly, even under worse conditions of crop production, and short harvest season, the cultivable land around Domuztepe could have produced more than enough grain without putting stress on labor requirements. Even under these conditions the site could have produced surplus. In fact, the site would have effectively started to produce surplus after 3km radius was exceeded.

Appendix D

Sequence of the Death Pit deposit (by permission of Stuart Campbell)

1. Shallow pit scooped into the edge of a terrace that runs to the north and west of the Death Pit.
2. Mixture of mainly cattle and some dog bones placed in the bottom of the Pit.
3. Significant phase of silting (but since top of silt undamaged or eroded probably with no significant gap immediately after the silting).
4. A secondary pit probably inserted with more cattle bones.
5. Probably a further shorter(?) phase of silting.
6. Either now or earlier (even as early as stage 1) a low bank of red soil dug out of the terrace edge is built to the south to create a raised hollow.
7. Dense quantities of human and some animal (especially cattle but also dog and sheep/goat) packed in base and sides of pit. Packed very hard against the east edge in particularly and probably stamped into a muddy side of the pit since bones penetrate a considerable distance into the pit wall. Packing is hard enough to compress and collapse skulls in some parts of the pit.
8. More human remains packed into the hollow together with pisé-like material and individual dumps of grey ash.
9. To the south of the low bank, dense deposits of broken pottery and animal bones (with very few human) raise the level of the lower ground to allow the raised hollow to be maintained, albeit at a slightly more elevated height. A thin ,possibly related, deposit may have been used to the west of the hollow to define the western edge as well.
10. There is a small patch of burning on the base of the hollow suggesting a small fire within it.
11. Stones are grouped on the base of the hollow, together with a few skulls and a cluster of intact long bones on the northern edge.
12. The hollow is filled with very large quantities of ash and some burnt brick, from a fire which took place elsewhere. Although some bones are scorched, none seem to have been cremated in this phase. The ash spills out beyond the hollow, probably to a maximum extent of about 10m across filling the depression defined by the terrace.

13. In the same time bracket as the ash is deposited (maybe within a few weeks either way), a skeleton of a 6 year old is laid on the southern edge of the ash, tightly bound and probably in a basket. Unlike the other skeletons, this one is articulated.
14. Later pits are dug to the immediate north and east of the Death Pit. Some have ashy contents of exactly the same nature as the Death Pit, some have unusual ceramics (including a multi-partitioned vessel) and one has a human jaw bone. A further human jaw is found in the silting fills above the Death Pit itself.
15. A later adult inhumation is buried to the south of the Death Pit.
16. An area around the Death Pit of about 20-30m across remains clear of domestic occupation for a sustained period – in the order of two generations perhaps. There is no evidence for ritual activities in the area of the Death Pit.

Nature of the human remains

1. The human remains are almost entirely disarticulated.
2. There are about 30 skulls to give an idea of the minimum number of individuals.
3. There was a single cremated child skeleton. The cremation does not seem to have been done in the Death Pit and the remains are rather scattered.
4. Much of the palaeopathology remains to be done so the facts here are based on a small number of individuals.
5. At least four skulls had been cut at the first vertebrae.
6. Long bones seem to have been deliberately broken. Except for a group in the ashy phase, no complete ones were found but many fragments, general more broken than the much more fragile ribs.
7. One skull was buried with the mandible intact and in one case the mandible probably fell away from the skull when it was placed in the Death Pit.
8. Many of the bones have significant wear on them – for example breaks on skulls edges are often considerably abraded – suggesting a period of 'circulation' prior to their final burial.
9. There may be an association between skulls and small patches of ash.
10. A couple of long bone fragments may have, more formally, been used as awls.

Other observations

1. The animals bones from within the Death Pit hollow were much less fragmentary than those found elsewhere on site (where they are presumed to have been food remains). Breakage is much less obvious than with the human remains.
2. The animal bones included two complete dog skulls.

3. Large stones and rounded pot sherds were placed as though they might have been intended to resemble skulls – this is particularly the case with the deposits at the base of the hollow which was to be filled with ash.
4. No clear grave goods were found, although there were four stamp seals and an unusual figurine (without its head) found in the pit.
5. There is no sign of occupation immediately preceding the Death Pit.
6. The whole series of activities probably took place over quite a short period of time. Although the initial deposits have evidence of silting over them, the fact that this silting was pristine suggests that little time elapsed between it being laid down and being covered. The later deposition of human remains and ash certainly took place over quite a short time period. Probably for the whole thing we are talking a periods of maybe at most a few months, maybe only a few weeks.
7. The fire from which the mass of ash came burnt at a high temperature and was probably mainly fuelled by dung.

REFERENCES

Adam, B.

1990 *Time in Social Theory.* Temple University Press, Philadelphia.

Adams, R. McC.

1965 *Land Behind Baghdad: A History of Settlement on the Diyala Plain.* University of Chicago Press, Chicago.

1974 Anthropological Perspectives on Ancient Trade. *Current Anthropology* 15: pp.239- 258.

1981 *Heartland of Cities.* University of Chicago Press, Chicago.

Adams, R.M. and Nissen, H.J.

1972 *The Uruk Countryside: The Natural Setting of Urban Societies.* University of Chicago Press, Chicago.

Ahrensberg, C.

1961 The Community as Object and as Sample. *American Anthropologist* 63(2): pp. 241-264.

Akkermans, P.M.M.G.

1988 An updated chronology for the northern Ubaid and late Chalcolithic periods in Syria: new evidence from Hammam et-Turkman. *Iraq* 50: pp. 87-108.

1989a Halaf Mortuary Practices. In *To the Euphrates and Beyond: Archaeological Studies in Honour of Maurits N. van Loon,* edited by O.M.C. Haex, H.H. Curvers, and P.M.M.G. Akkermans, pp. 75-88. A.A.Balkema, Rotterdam.

1989b Tradition and Social Change in Northern Mesopotamia During the Later Fifth and Fourth Millennium BC. In *Upon This Foundation-The Ubaid Reconsidered,* pp. 339-367. Museum Tusculanum Press, Copenhagen.

1989c The Neolithic of the Balikh valley, northern Syria: a first assessment. *Paléorient* 15(1): pp. 121-133.

1991 New radiocarbon dates for the Later Neolithic of northern Syria, *Paléorient* 17(1): pp. 121-125.

1993 *Villages in the Steppe: Later Neolithic settlement and Subsistence in the Balikh Valley, northern Syria.* Ann Arbor, International Monographs in Prehistory.

Akkermans, P.M.M.G. (ed.)
1988 An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence form Tell Hammam et-Turkman. *Iraq* 50: 109-145.

1989 *Excavations at Tell Sabi Abyad.* BAR International Series 468, Oxford.

1996 *Tell Sabi Abyad: the late Neolithic Settlement v.1*, Nederlands Historisch-Archaeologisch Institut, Istanbul.

Akkermans P.M.M.G. and K. Duistermaat
1997 Of Storage and Nomads: The Sealings from Late Neolithic Sabi Abyad, Syria. *Paleorient* 22(2): pp. 17-44.

Akkermans, P.M.M.G. and Le Mière, M.
1992 The 1988 excavations at Tell Sabi Abyad, a Later Neolithic village in northern Syria. *American Journal of Archaeology* 96: pp.1-22.

Akkermans P.M.M.G. and M. Verhoeven
1995 An image of Complexity: The Burnt Village at Late Neolithic Sabi Abyad, Syria. *American Journal of Archaeology* 99: pp. 5-32.

Al-Adami, K.A.
1968 Excavations at Tell es-Sawwan (second season). *Sumer* 24: pp. 57-94.

Al-Radi, S. and Seeden, H.
1980 The AUB Rescue Excavations at Shams ed-Din Tannira. *Berytus* 28: pp. 88-126.

Algaze, G.
1989a The Uruk Expansion: Cross-cultural exchange in early Mesopotamian Civilization. *Current Anthropology* 30: pp. 571-608.

1989b A new frontier: first results of the Tigris-Euphrates Archaeological Project. *Journal of Near Eastern Studies* 48: pp. 241-281.

1993 *The Uruk World System, The Dynamics of Expansion of Early Mesopotamian Civilization.* University of Chicago Press, Chicago.

2001 Initial Social Complexity in Southwestern Asia. The Mesopotamian Advantage. *Current Anthropology* 42: pp. 199-233.

Algaze G., Ataman K., Ingraham M., Marfoe L., McDonald M., Miller M., Snow C., Stein G., Verhaaren B., Wattenmaker P., Wilkinson T., Yener A.
1986 The Chicago Euphrates Archeological Project 1980-1984: an interim Report, *Anatolica* 13, pp. 37-148

Algaze G., Breuninger R., Knudstad J.
1994 The Tigris-Euphrates Archaeological Reconnaissance Project: Final report of the Birecik and Carchemish Dam Survey areas. *Anatolica* 20, pp. 1-96

Algaze, G., Breuninger, R., Lightfoot, C. and Rosenberg, M.
1991 The Tigris-Euphrates Archaeological Reconnaissance Project: A preliminary report of the 1989-90 seasons. *Anatolica* 17: pp. 175-240.

Anderson, B.
1991 *Imagined Communities: Reflections on the Origin and Spread of Nationalism.* Revised edition. Verso, London.

Anschuetz, K. F., Wilshusen, R., Scheick, C.L.
2001 An Archaeology of Landscapes: Perspectives and Directions. *Journal of Archaeological Research.* Vol.9, no.2.

Appadurai, A.
1986 Introduction, Commodities and the Politics of Value. In, *The Social Life of Things: Commodities in Cultural Perspective,* edited by A. Appadurai, pp. 3-63. Cambridge University Press, Cambridge.

Arnold, J. (Ed.).
1996 *Emergent Complexity; the evolution of intermediate societies.* International Monographs in Prehistory-Archaeological Series 9, Ann Arbor.

Aurenche, O.
1981a *La Maison Orientale*, B.A.H.CIX, Paris.

1981b L'Architecture Mésopotamie du 7e au 4e millénaires. *Paléorient* 7(2): pp. 43-55.

Aurenche, O. and Evin, J.
1987 List of 14C dates from the archaeological sites of the Near East from 14,000 to 5700 BP. In *Chronologies in the Near East: Relative and Absolute Chronologies 16,000-4,000 BP*, BAR International Series 379, edited by O. Aurenche, J.Evin, and F. Hours, pp. 687-744. Oxford.

Azoury, I. et al.
1980 A Stone Age Village on the Euphrates: Reports from the Halafian Settlement at Shams ed-Din Tannira: AUB Rescue Excavations. *Berytus* 28: pp.0 87-126.

Bader, N.O.
1989 *Earliest Cultivators in Northern Mesopotamia: The Investigations of Soviet Archaeological Expedition in Iraq at Settlements Tell ell Magzaliya, Tell Sotto, Kültepe.* Nauka, Moscow.

Bader, N.O., Merpert, N.I. and Munchaev, R.M.
1981 The Soviet Expedition's Surveys in the Sinjar Valley. *Sumer* 37, pp. 43-64.

Bailey, D.
1993 Chronotypic Tension in Bulgarian Prehistory: 6500-3500. *World Archaeology* 25;2. pp. 204-222.

1999 What is a tell? Settlement in fifth millennium Bulgaria. In *Making Places in the Prehistoric World*, edited by J. Bruck and M. Goodman. University of Cambridge Press, Cambridge

Ball, W., Tucker, D. and Wilkinson, T.J.
1989 The Tell al-Hawa project. Archaeological investigations in the north Jezira 1986-87. *Iraq* 51: pp. 1-66.

Bar-Yosef, O.
1998 On the Nature of Transitions: the Middle to Upper Paleolithic and the Neolithic Revolution. *Cambridge Archaeological Journal* 8(2): pp. 141-63.

Bar-Yosef, O. and A. Belfer-Cohen
1989 The Levantine PPNB Interaction Sphere. In *People and Culture Change*, edited by I. Hershkovitz, pp. 59-72. BAR, Oxford.

Barnard, A. and J. Woodburn
1988 Property, Power and Ideology in Hunting and Gathering Societies: An Introduction. In *Hunters and Gatherers 2: Property, Power and Ideology,* edited by T. Ingold, D. Riches and J. Woodburn, pp.4-31. Berg, Oxford.

Barrett, J.C.
1988 The living, the dead and the ancestors: Neolithic and Early Bronze Age mortuary practices. In *The Archaeology of Context in the Neolithic and Bronze Age: Recent Trends,* edited by J.C. Barrett and I.A. Kinnes, pp. 30-41. Department of Archaeology and Prehistory, University of Sheffield.

1990 The Monumentality of Death: the character of Early Bronze Age Mounds in Southern Britain. *World Archaeology* 22: pp. 179-89.

1994a *Fragments from Antiquity. Archaeology and Social Life in Britain 2900-1200 BC.* Blackwell, Oxford.

1994b Defining Domestic Space in the Bronze Age of Southern Britain. In *The Architecture and Order*, edited by M.P. Pearson and C. Richards. Routledge, London and New York.

Barth, F.

1975 *Ritual and Knowledge among the Battaman of New Guinea.* Yale University Press, New Haven.

1987 *Cosmologies in the Making.* Cambridge University Press, Cambridge.

Bates, D.

1971 The Role of the State in Peasant-Nomad Mutualism. *Anthropological Quarterly,* 44: 109-31

1973 *Nomads and Farmers: A Study of the Yoruk of Southeastern Turkey.* Ann Arbor, University of Michigan Anthropological Papers no.52.

Bell, C.

1997 *Ritual: Perspectives and Dimensions.* Oxford University Press, New York.

Bender, B.

1978 Gatherer-Hunter to Farmer: A Social Perspective. *World Archaeology* 10(2): pp. 204-222.

1990 The Dynamics of Nonhierarchical Societies. In *The Evolution of Political Systems: Sociopolitics in Small-Scale Sedentary Societies*, edited by S. Upham, pp. 247-263. Cambridge University Press, Cambridge.

1993 *Landscape: Politics and Perspectives.* Berg, Oxford.

1998 *Stonehenge: Making Space.* Berg, New York

Bender, B and B. Morris

1988 Twenty years of history, evolution and Social Change in Gatherer-Hunter Studies. In *Hunters and Gatherers 1: History, Evolution and Social Change,* edited by T. Ingold, D. Riches and J. Woodburn, pp. 117-134. Berg, Oxford.

Bender, B., Hamilton, S., and Tilley, C.
1997 Leskernick: Stone Worlds: alternative narrative; nested landscapes. *Proceedings of the Prehistoric Society* 63: 147-178.

Bender, J. and Wellbery, D.E.
1991 Introduction. In *Chronotypes: the Construction of Time*, edited by J. Bender and D.E. Wellbery. Stanford: Stanford University Press, pp. 1-18.

Berger, P. and T. Luckmann
1967 *The Social Construction of Reality: A Treatise in the Sociology of Knowledge.* Doubleday Anchor, Garden City, N.Y.

Bernbeck, R., S. Pollock, C. Coursey
1999 The Halaf Settlement at Kazane Hoyuk: Preliminary Report on the 1996 and 1997 seasons. *Anatolica* 25: pp. 109-147.

Bintliff, J.L.
1977 *Natural Environment and Human Settlement in Prehistoric Greece.* Oxford: British Archaeological Reports International Series 28.

Blaylock, S. R., French, D., Summers, G.D.
1990 The Adiyaman Survey: An interim Report. *Anatolian Studies* 40, pp. 81-135.

Bloch, M.
1977 The Past and the Present in the Present. *Man* 12: pp. 278-292.

Bloch, M and Parry, J.
1982 *Death and the Regeneration of Life.* Cambridge University Press, Cambridge.

Bogoslavskaja, N.F.
1972 On the problem of the origin of the Halaf culture. *Sovetskaya Archeologia* 2: pp. 3-16.

Boserup, E.
1965 *The Conditions of Agricultural Growth.* Allen& Unwin, London.

Bottema, S., van Zeist, W.
1981 Palynological Eidence for the Climatic History of the Near East. *Prehistoire du Levant,* pp. 111-132.

Bourdieu, P.
1977 *Outline of a Theory of Practice*. Cambridge University Press, Cambridge.

Bradley, R.
1990 *The Passage of Arms.* Cambridge University Press, Cambridge.

1991 Ritual, Time and History. *World Archaeology* 23(2): 209-219.

1993 *Altering the Earth, the origins of Monuments in Britain and Continental Europe.* Society of Antiquaries of Scotland, Edinburgh.

1998 *The Significance of Monuments: on the Shaping of Human Experience in Neolithic and Bronze Age Europe.* Routledge, London.

2002 *The Past in Prehistoric Societies*. Routledge, London and New York

2003 A Life Less Ordinary: the Ritualization of the Domestic Sphere in Later Prehistoric Europe. *Cambridge Archaeological Journal* 13:1, 5-23.

Braidwood, R.J.
1937 *Mounds in the Plain of Antioch. An Archaeological Survey.* Oriental Institute Publications, Chicago.

Braidwood, R.J. and Braidwood, L.S.
1960 *Excavations in the Plain of Antioch I. The Earlier Assemblages, Phases A-J.* Oriental Institute Publications, Chicago.

Braidwood, R.J., Cambel, H, Schirmer, W.
1981 Beginnings of Village-Farming Communities in Southeastern Turkey: Cayonu Tepesi 1978 and 1979. *Journal of Field Archaeology* 8: pp. 249-258.

Braidwood, R.J., Howe, B. et al
1960 *Prehistoric Investigations in Iraqi Kurdistan, SOAC 31*. University of Chicago Press, Chicago.

Breniquet, C.
1987 Nouvelle Hypothese sur la Disparition de la Culture de Halaf. In *Préhistoire de la Mesopotamie,* edited by J.-L. Huot, pp. 231-242. CNRS, Paris.

1989 Les origines de la culture d'Obeid en Mésopotamie du nord. In

Upon this Foundation: The 'Ubaid Reconsidered, edited by E.F. Henrickson and I. Thuesen, pp. 325-338. Museum Tusculanum Press, Copenhagen.

1991 Un site Halafien en Turque meridionale: Tell Turlu. *Akkadica* 71: pp. 1-35.

1996 La Disparition de la Culture de Halaf. In *Bibliotheque de la Delegation archeologique francaise en Iraq 9*. Editions Recherche sur les Civilisations, Paris.

Bulgarelli, G.M.

1981 Tell Hassan: the Lithic Industry. *Sumer*, 40: pp. 290-292.

Byrd, B.

1994 Public and Private, Domestic and Corporate; The Emergence of the Southwest Asian Village. *American Antiquity* 59(4): pp. 639-666.

2000 Households in transition: Neolithic Social Organization within Southwest Asia. In *Life in Neolithic farming communities*, edited by I. Kuijt, pp. 63-92. Plenum Press, New York.

Byrd, B.F. and Monahan, C.M.

1995 Death, Mortuary Ritual and Natufian Social Structure. *Journal of Anthropological Archaeology* 14: pp. 251-287.

Calvet, Y.

1987 La phase'Oueilli de l'époque d'Obeid. In *Préhistoire de la Mesopotamie*, edited by J.-L. Huot, pp. 129-151. CNRS, Paris.

Campbell, S.

1992 *Culture, Chronology and Change in the Later Neolithic of North Mesopotamia.* Dissertation submitted to University of Edinburgh.

1995 Death for the Living in the Late Neolithic in North Mesopotamia. In *The Archaeology of Death in the Ancient Near East,* edited by S. Campbell et al., pp. 29-34.

1998 Problems of Definition: the origins of the Halaf in North Iraq. In *Subartu,* edited by M. Lebeau, pp. 39-52. Brussels.

2000 The Burnt House at Arpachiyah: A Reexamination. *BASOR* 318, pp. 1-40

Campbell, S., E. Carter
1998 Excavations at Domuztepe 1997. *Kazi Sonuclari Toplantisi* 20: pp. 283-294.

Campbell, S., E. Carter, S. Witcher, S. Anderson, A. Kennedy, E. Healey
1999 Emerging Complexity on the Kahramanmaras Plain, Turkey: The Domuztepe Project, 1995-1997. *American Journal of Archaeology* 103, pp.395-418.

Caneva, I.
1999 Early Farmers on the Cilician Coast: Yumuktepe in the 7th millennium BC. In *Neolithic in Turkey*, edited by M. Ozdogan and N. Basgelen, pp. 105-114. Istanbul Arkeoloji ve Sanat Yayinlari, Istanbul.

Cannon, A.
1989 The Historical Dimension in Mortuary Expressions of Status and Sentiment. *Current Anthropology* 30: pp.437-458.

2002 Spatial Narratives of Death, Memory and transcendence. In *The Space and Place of Death,* edited by H. Silverman and D. B. Small, Archaeological Papers of the American Anthropological Association Number 11, pp. 191-199

Carter, E.
1996 Report on the Kahramanmaras Archaeological Survey Project from 24/9/93 to 11/11/93. *Arastirma Sonuclari Toplantisi* 13: pp. 331-341.

1997 The Kahramanmaras Archaeological Survey Project: A Preliminary Report on the 1994 Season. *Arastirma Sonuclari Toplantisi* 14: pp. 289-305.

Carter, E., S. Campbell
1999 Preliminary Report on the 1998 Season of Excavation at Domuztepe. *Arastirma Sonuclari Toplantisi* 19: pp. 133-142

Carter, E., C. Eissenstat, L. Swartz
1997 Report on the Archaeological Work in Domuztepe and Its Environs in 1995. *Kazi Sonuclari Toplantisi* 18: pp. 173-187.

Carter, E., S. Campbell, J. Snead
1999 Excavations and Survey at Domuztepe 1996. *Anatolia Antiqua* 8.

Cauvin, J.
2000 *The Birth of Gods and the Origins of Agriculture.* Cambridge University Press, Cambridge.

Cauvin, J., I. Hodder, G. Rollefson, O. Bar-Yosef and T. Watkins
2001 Review Feature: The Birth of Gods and the Origins of Agriculture. *Cambridge Archaeological Journal* 11(1): pp. 105-122.

Cauvin, M.C., Balkan, N., Besnus, Y., Saroglu, F.
1986 Origine de l'Obsidienne de Cafer Hoyuk (Turquie): Premiers Results'. *Paleorient* 12:2, 89-97.

Chapman, J.
1990 Social Inequality on Bulgarian Tells and the Varna Problem. In *The Social Archaeology of Houses*, edited by R. Samson. Edinburgh University Press, Edinburgh.

1994 The Living, the dead and the Ancestors: time, life cycles and the mortuary domain in later European prehistory. In *Ritual and Remembrance: responses to death in human societies,* edited by J. Davies, pp. 40-85. Sheffield Academic Press, Sheffield.

1997 Places as Timemarks-the social construction of prehistoric landscapes in Eastern Hungary. In *Semiotics of Landscape: Archaeology of Mind,* British Archaeological Reports, International Series 661, edited by G. Nash, pp. 31-45. Archaeopress, Oxford.

2000 *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South-Eastern Europe*. Routledge, London and New York.

Chayanov, A.V.
1966 *The Theory of Peasant Economy*, edited by D. Thorner, B. Kerblay, and R.E.F. Smith. University of Wisconsin Press, Madison.

Childe, V.G.
1951 *Social Evolution.* Watts, London.

1952 *New Light on the Most Ancient East.* Routledge and Kegan Paul, London.

1956 *Piecing Together the Past*. Routledge and Kegan Paul, London.

Chisholm, M.
1979 *Rural Settlement and Land Use.* Hutchinson, London.

Christaller, W.
1966 *Central Places in Southern Germany*. Prentice-Hall, Englewood Cliffs.

Cohen, A.P.
1985 *The Symbolic Construction of Community*. Tavistock (Routledge), London.

Cohen, A.P. (Ed.).
1982 *Belonging. Identity and Social organization in British rural Cultures.* University of Manchester Press, Manchester.

Connerton, P.
1989 *How Societies Remember*. Cambridge University Press, Cambridge.

Contenson, H. de
1973 Le niveau Halafien de Ras Shamra: rapport preliminaire sur les campagnes 1968-72 dans le sondage prehistorique. *Syria* 50: pp. 13-33.

1982 Les phases prehistoriques de Ras Shamra et de l'Amuq. *Paléorient* 8(2): pp. 95-98.

Copeland, L.
1979 Observations on the prehistory of the Balikh Valley, Syria, during the 7th to 4th millenia BC. *Paléorient* 5: pp. 251-275.

Copeland, L. and Hours, F.
1986 L'Expansion de la Civilisation Halafienne, une Interpretation de la Repartition des Sites. In *Préhistoire de la Mesopotamie*, edited by J.-L. Huot, J.-L., pp. 209-220. CNRS, Paris.

1987 The Halafians, their predecessors and their contemporaries in northern Syria and the Levant: relative and absolute chronologies. In *Chronologies in the Near East: Relative and Absolute Chronologies 16,000-4,000 BP*, edited by O. Aurenche, J. Evin, J. and F. Hours, pp. 401-426. BAR International Series 379, Oxford.

Cosgrove, D.
1984 *Social Formation and Symbolic Landscape*. Croom Helm, London.

1985 Prospect, Perspective and the Evolution of the Landscape Idea. *Transactions of the Institute of British Geographers* 10: 45-62

1988 *The Iconography of Landscape.* Cambridge University Press, Cambridge.

Courty, M.A.
1994 Le Cadre Paleogeographique des Occupations Humaines dans le Bassin du Haut-Khabur (Syrie du Nord Est), Premiers Resultats. *Paleorient* 20(1): pp. 21-59.

Cowgill, G.L.
1993 Distinguished Lecture in Archaeology: Beyond Criticizing New Archaeology. *American Anthropologist* 95: 551-573.

Crow, G. and Allan, G.
1994 *Community Life. An introduction to local social relations*. Harvester Wheatsheaf, Hemel Hempstead.

Crumley, C.L. and W.H. Marquardt
1987 Theoretical Issues in the Analysis of Spatial Patterning. In *Regional Dynamics: Burgundian Landscapes in Historical Perspective*, edited by C. L. Crumley and W.H. Marquardt, pp.1-18. Academic Press, New York.

Curtis, J.
1981 Arpachiyah. In *Fifty Years of Mesopotamian Discovery*, edited by J. Curtis, pp. 30-36. British School of Archaeology in Iraq, London.

Davidson, T.E.
1977 *Regional Variation within the Halaf Ceramic Tradition*. PhD Thesis, University of Edinburgh.

1981 Pottery manufacture and trade at the prehistoric site of Tell Aqab, Syria. *Journal of Field Archaeology* 8: pp. 65-77.

Davidson, T.E. and McKerrell, H.
1976 Pottery analysis and Halaf period trade in the Khabur headwaters region. *Iraq* 28: pp. 45-56.

1980 The neutron activation analysis of Halaf and Ubaid pottery from Tell Arpachiyah and Tepe Gawra. *Iraq* 42: pp. 155-167.

Davidson, T.E and Watkins, T.
1981 Two seasons of excavations at Tell Aqab in the Jezirah, north east Syria. *Iraq* 43: pp. 1-18.

Denevan, W.M.
1992 The Pristine Myth: The landscape of the Americas in 1492. *Annals of the Association of American Geographers* 82: pp. 369-385.

Dewar, R. E.
1986 Discovering Settlement Systems of the Past in New England Site Distributions. *Man in the Northeast* 31:77-88.

1991 Incorporating Variation in Occupation Span into Settlement Pattern Analysis. *American Antiquity* 56(4): 604-620.

Dewar, R.E. and K.A. McBride
1992 Remnant Settlement Patterns. In *Space, Time, and Archaeological Landscapes*, ed. J. Rosignol and L. Wandsnider, pp. 227-255. Plenum Press, New York.

Dewar, Robert E.
1991 Incorporating Variation in Occupation Span into Settlement-Pattern Analysis. *American Antiquity* 56: 604-620.

Derrida, J.
1986 Difference. In *Deconstruction in Context*, edited by M.C. Taylor, pp. 396-420. University of Chicago, Chicago.

Dixon, J.E.
1977 Obsidian characterisation studies in the Mediterranean and Near East. In *Advances in Obsidian Glass Studies,* edited by R.E. Taylor, pp. 288-333.

DuPlat Taylor, J, Seton Williams M.V., and Waechter, J.
1950 The Excavations at Sakce Gozu. *Iraq* 12: pp. 53-138.

Duistermaat, K.
1996 The Seals and Sealings. In *Tell Sabi Abyad: The Late Neolithic Settlement,* pp. 339-401. Leiden: Nederlands Instituut voor het Nabije Oosten.

Durkheim, E.
1965 *The Elementary Forms of the Religious Life.* Free Press, New York.

Earle, T.K.
1991 The Evolution of Chiefdoms. In *Chiefdoms: Power, Economy and Ideology,* edited by T.K. Earle, pp. 1-15. Cambridge University Press, Cambridge.

Eissenstat, C.
1998 Unpublished Report on the Kahramanmarash Surveys 1996-1998. On file in Manchester University and University of California, Los Angeles.

Edmonds, M.
1999 *Ancestral Geographies of the Neolithic: Landscape, Monuments and Memory*. Routledge, London, and New York.

Ellen, R.
1988 Foraging, Starch Extraction and the Sedentary Lifestyle in the Lowland Rainforest of Central Seram. In *Hunters and Gatherers 1: History, Evoltuion and Social Change,* edited by T. Ingold, D. Riches and J. Woodburn, pp. 117-134. Berg, Oxford.

Epstein, S.M.
1977 *The Trade in Near Eastern Obsidian.* M.A. dissertation, University of Bradford.

Esin, U.
1979 Tulintepe Excavations, 1973. *Keban Project 1973 Activities*, pp. 121-125

Esin U, Arsebuk, G.
1982 Tulintepe Excavations, 1974. *Keban Project 1974-75 Activities,* pp. 127-133.

Faroqhi, S., McGowan, B., Quataert, D., Pamuk, S.
1997 *An Economic and Social History of the Ottoman Empire V.2 1600-1914.* Cambridge University Press. Cambridge.

Field, B.S.
1969 Preliminary report on Botanical Remains from Choga Mami. *Sumer* 25: pp. 138-139.

Ferioli, P., Fiandra, E., Fisore, G. and Frangipane, M., (editors)
1994 *Archives Before Writing*. Universitá di Roma.

Flannery, K.V.
1969 Origins and ecological effects of early Near Eastern Domestication. In *The Domestication and Exploitation of Plants and Animals* edited by P.J. Ucko and G.W. Dimbleby. London: Duckworth, pp. 73-100.

1972a The Cultural Evolution of Civilizations. *Annual Review of Ecology and Systematics* 3: pp. 399-426.

1972b The origins of the village as a settlement type in Mesoamerica and the Near East: acomparative study. In *Man, Settlement and Urbanism*, edited by P.J. Ucko, R. Tringham, and G.W. Dimbleby, pp. 23-54. Duckworth, London.

1973 The Origins of Agriculture. *Annual Review of Anthropology* 2: pp. 271-310.

1976 *The Early Mesoamerican Village*. Academic Press, New York.

1995 Prehistoric Social Evolution. In *Prehistoric Social Evolution*, edited by C.R. Ember and M. Ember, pp.1-26. Prentice Hall, Englewood.

Forest, J.-D.

1983 Aux Origines de l'Architecture Obeidienne: les Plans de Type Samarra. *Akkadica* 34: pp. 1-47.

1987 La Grande Architecture Obeidienne: Saforme et sa fonction. In *Prehistoire de la Mesopotamie,* edited by Huot, pp. 209-220.

Francaviglia, V.M.

1990 Les gisements d'obsidienne hypercaline dans l'ancien monde: etude comparative. *Revue d'Archeometrie* 14, 43-65.

Frangipane, M.

1997 Arslantepe. In *The Oxford Encyclopedia of Archaeology in the Near East, vol I,* edited by E.M. Meyers, pp 212-214. Turin, 125-147

Frangipane,M. and A. Palmieri

1987 Urbanization in Perimesopotamian areas: The case of Eastern Anatolia. In *Studies in the Neolithic and Urban Revolutions: The V. Gordon Childe Colloquium, Mexico, 1986*, edited by L. Manzanilla. B.A.R., International Series 349, pp 295-318. Oxford.

Frazer, E.

1999 *The Problem of Communitarian Politics. Unity and Conflict.* Oxford University Press, Oxford.

French, D.H.

1962 Excavations at Can Hasan. First Preliminary Report, 1961. *Anatolian Studies* 12: pp. 27-40.

Fried, M.H.

1960 On the evolution of social stratification and the state. In *Culture in History*, edited by S. Diamond, pp. 713-731. Columbia University Press, New York.

1967 *The Evolution of Political Society*. Random House, New York.

Garrard, A et al.
1996 The Early Prehistory of the Sakcagozu Region, North Levantine Rift Valley: Report on 1995 Survey Season. *Anatolian Studies* 66: pp. 58-67.

Garstang, J.
1908 Excavations at Sakje-Geuzi in North Syria; preliminary report for1908. *Liverpool Annals of Archaeology and Anthropology* 1: pp. 97-117.

1953 *Prehistoric Mersin: Yumuk Tepe in Southern Turkey.* Clarendon Press, Oxford.

Garstang, J. et al
1937 Third report on the excavations at Sakje-Geuzi, 1908-1911. *Liverpool Annals of Archaeology and Anthropology* 24: pp. 119-140.

Gell, Alfred
1992 *The Anthropology of Time. Cultural Construction of Temporal Maps and Images.* Berg, Oxford/Providence.

Giddens, A.
1979 *Central Problems in Social Theory.* Macmillan, London

1984 *The Constitution of Society.* Polity Press, Cambridge.

1991 *The Consequences of Modernity.* Cambridge: Polity.

Gilman, P.
1991 Trajectories toward social complexity in the later prehistory of the Mediterranean. In *Chiefdoms: Power, Economy and Ideology*, edited by T.K. Earle, pp. 146-168. Cambridge University Press, Cambridge.

Goodman, M.
1999 Temporalities of Prehistoric Life: Household Development and Community Continuity. In *Making Places in the Prehistoric World,* edited by J. Bruck and M. Goodman. Cambridge University Press: Cambridge.

Goody, J.
1958 Developmental Cycle in Domestic Groups. *Papers in Social Anthropology, no.1.* Cambridge University, Cambridge.

1962 *Death, Property and the Ancestors.* Tavistock, London.

1972 Domestic Groups. *Addison Wesley Modular Publications in Anthropology 28.* Addison Wesley, Massachusetts.

1986 *The Logic of Writing and the Organisation of Society.* Oxford University Press, Oxford.

1987 *The Interface between the written and the oral.* Cambridge University Press, Cambridge.

Gophna, R. and S. Sadeh
1988 Excavations at Tell Tsaf: An Early Chalcolithic Site in the Jordan Valley. *Tel Aviv 15-16.*1: pp. 3-36.

Goring-Morris, A. N.
2000 The Quick and the Dead: the social Context of Aceramic Neolithic Mortuary Practices as seen from Kfar Hahoresh. In *Life in Neolithic Farming Communities*, edited by Kuijt, pp. 103-136. Plenum Press, New York.

Gosden, C.
1994 *Social Being and Time.* Blackwell, Oxford.

Gosden, C. and Head, L.
1994 Landscape-A usefully ambiguous concept. *Archaeology in Oceania* 29: 113-116.

Gosden, C. and Y. Marshall
1999 The Cultural Biography of Objects. *World Archaeology* 31(2): pp. 169-178.

Goudie, A.S.
1987 Geography and Archaeology: The Growth of a Relationship. In *Landscape and Culture: Geographical and Archaeological Perspectives,* edited by Wagstaff, J.M. Basil Blackwell, New York, pp 11-25.

Gregory, C.
1980 Gifts to men and gifts to gods; gift exchange and capital accumulation in Contemporary Papua. *Man* 15: pp.628-652.

1982 *Gifts and Commodities.* Academic Press, London.

Groth, P. and Bressi, T.W. eds.
1997 *Understanding Ordinary Landscapes*, Yale University Press, New Haven.

Gustavson-Gaube, C.
1981 Shams ed-Din Tannira; the Halafian pottery of Area A. *Berytus* 29: pp. 9-182.

Halbwachs, M.
1992 On Collective Memory. In L.A. Coser (ed). University of Chicago Press, Chicago and London.

Halstead, P.
1981 Counting sheep in Neolithic and Bronze Age Greece. In *Pattern of the Past: Studies in Honour of David Clarke* edited by I. Hodder, G. Isaac and N. Hammond. Cambridge: Cambridge University Press. Pp. 307-39.

1996 Pastoralism or Household herding? Problems of scale and specialization in early Greek animal husbandry. *World Archaeology* 28 (1):20-42.

1999 Neighbours from Hell. The Household in Neolithic Greece. In *Neolithic Society in Greece,* edited by Paul Halstead. Sheffield Academic Press, Sheffield.

Halstead, P. (Ed).
1999 *Neolithic Society in Greece.* Sheffield Academic Press, Sheffield.

Halstead, P., G. Jones
1980 Early Neolithic economy in Thessaly-some evidence from excavations at Prodromos. *Anthropologika* 1: 93-117.

Halstead, P. and O'Shea, J.
1982 A friend in need is a friend indeed; social storage and the origins of social ranking. In *Ranking, Resource and Exchange*, edited by C. Renfrew and S. Shennan, pp. 92-99. Cambridge University Press, Cambridge.

1989 *Bad year Economics: Cultural Responses to Risk and Uncertainty.* Cambridge University Press, Cambridge.

Hauptmann, H.
1987 Lidar Hoyuk and Nevali Cori 1986. *Anatolian Studies* 37: pp. 203-207.

1993 Ein Kultgebaude in Nevali Cori. In *Between the Rivers and over the Mountains,* edited by M. Frangipane et al., pp. 37-69.

1999 The Urfa Region. In *Neolithic in Turkey*, edited by Ozdogan and Basgelen, pp. 65-86. Arkeoloji ve Sanat Yayinlari, Istanbul

Hayden, B.
1996 Thresholds of Power in Emergent Complex Societies. In *Emergent Complexity; the evolution of intermediate societies,* pp. 50-58. International Monographs in Prehistory-Archaeological Series 9, Ann Arbor.

Healey, E.
2001 The Role of Obsidian at the Halaf Site of Domuztepe SE Anatolia. In *Proceedings of the 3rd International Workshop on Lithics,* Venice, November 1998, ed. I. Caneva.

Heidegger, M.
1962 *Being and Time.* Blackwell, Oxford.

1977 Building, Dwelling, Thinking. In *Basic Writings,* edited by D. F. Krell, pp. 319-340. Routledge, London.

Helbaek, H.
1960 Ecological effect of irrigation in Ancient Mesopotamia. *Iraq* 42: pp. 186-196.

1964 Early Hassuna vegetable food at Tell es-Sawwan near Samarra. *Sumer* 20: pp. 45-48.

1972a Samarran irrigation agriculture at Choga Mami in Iraq. *Iraq* 34: pp. 35-48.

1972b Traces of plants at the early ceramic site of Umm Dabaghiyah. *Iraq* 34: pp.17-19.

Hijara, I.
1978 Three New Graves at Arpachiyah. *World Archaeology* 10: pp. 125-128.

1980 *The Halaf Period in Northern Mesopotamia.* PhD Thesis, Institute of Archaeology, London.

Hijara, I. et al
1980 Arpachiyah 1976. *Iraq* 42: pp. 131-154.

Hill, C. and C. Eissenstat

1998 Late Quaternary Geomorphological Changes in Southeastern Turkey. Paper presented at *The American Geological Society Proceedings.*

Hirsch, E. and O'Hanlon, M. eds.
1995 *The Archaeology of Landscape: Perspectives on Place and Space.* Clarendon Press, Oxford.

Hobsbawm, E.
1983 Introduction: Inventing Tradition. In *The Invention of Tradition,* edited by E. Hobsbawm and T. Ranger. Cambridge University Press, Cambridge.

Hodder, I.
1990 *The Domestication of Europe.* Oxford: Blackwell

1993 The Narrative and Rhetoric of material culture sequences. *World Archaeology* 25(2): pp. 268-282.

2001 Review Feature for "the Birth of Gods and Origins of Agriculture by J. Cauvin". *Cambridge Archaeological Journal* 11 (1), pp.105-21

I. Hodder (ed.)
1996 *On the surface: Çatalhöyük 1993-95.* Cambridge, McDonald Institute for Archaeological Research and British Institute of Archaeology at Ankara.

Hodder, I. and Orton, C.
1976 *Spatial Analysis in Archaeology.* Cambridge University Press, Cambridge.

Hoggett, P (Ed).
1997 *Contested Communities: experiences, struggles, policies.* Policy Press, Bristol.

Hole, F.
1984 A Reassessment of the Neolithic Revolution. *Paleorient* 10: pp. 49-60.

1989 Patterns of Burial in the 5th millennium. In *Upon this Foundation-The Ubaid Reconsidered,* edited by E.F. Henrickson et al., pp. 149-180.

2000 Is Size Important? Function and Hierarchy in Neolithic Settlements. In *Life in Neolithic Farming Communities,* edited by I. Kuijt. Plenum Press, New York.

Hole, F. and Flannery, K.
1967 The prehistory of southwestern Asia: a preliminary report. *Proceedings of the Prehistoric Society* 33: pp. 147-206.

Hole, F. and Johnston, G.A.
1986-7 Umm Qseir on the Khabur: preliminary report on the 1986 excavation. *Annales Archéologiques Arabes Syriennes* 36/37: pp. 172-220.

Holtorf, C.J.
1995 Object Oriented and Problem Oriented approaches of archaeological research-reconsidered. *Hephaistos* 13: pp. 7-18.

1996 Towards a Chronology of Megaliths: Understanding Monumental Time and Cultural Memory. *Journal of European Archaeology* 4: pp. 119-152.

Hoskins, J.
1998 *Biographical Objects: How Things Tell the Story of People's Lives.* Routledge, London.

Hubbard, R.N.L.B
1980 Halafian agriculture and environment at Arpachiyah. *Iraq* 42: pp. 153-154.

Huot, J.L.
1989 Ubidian Villages of Lower Mesopotamia. Permanence and Evolution from Ubaid 0 to Ubaid 4 as seen from Tell el'ouellie. In *Upon this Foundation-The Ubaid Reconsidered,* edited by E.F. Henrickson et al., pp. 19-42. Museum Tusculanum Press, Copenhagen.

Ingold, T.
1986 Territoriality and Tenure: The Appropriation of Space in Hunting and Gathering Societies. In *The Appropriation of Nature: Essays on Human Ecology and Social Relations,* edited by T. Ingold, pp. 130-164. Manchester University Press, Manchester.

1993 The temporality of Landscape. *World Archaeology* 25(2): pp. 152-174.

2000 *The Perception of the Environment.* Routledge, London.

Ingold, T. (Ed.).
1986 *The Appropriation of Nature: Essays on Human Ecology and Social Relations.* Manchester University Press, Manchester.

Jackson, J. B.
1984 *Discovering the Vernacular Landscape,* Yale University Press, New Haven.

Jameson, R.
1987 Purity and Power at the Victorian Dinner Party. In *The Archaeology of Contextual Meanings,* edited by Ian Hodder, pp. 55-65. Cambridge University Press, London.

Jasim, S.A.
1985 *The Ubaid Period in Iraq: Recent Excavations in the Hamrin Region.* BAR International Series 267. BAR, Oxford.

Johnson, A. W. and T. Earle
1987 *The Evolution of Human Societies from Foraging Group to Agrarian State*. Stanford University Press, Stanford.

Kaplan, J.
1960 The Relation of the Chalcolithic Pottery of Palestine to Halafian Ware. *Bulletin of the American School of Oriental Research* 159: pp. 32-26.

Kent, S.
1990 A cross-cultural study of segmentation, architecture and the use of space. In *Domestic Architecture and the Use of Space,* edited by S. Kent, pp. 127-152. Cambridge University Press, Cambridge.

Kent, S. (Ed.).
1990 *Domestic Architecture and the Use of Space*. Cambridge University Press, Cambridge.

Kielt-Costello, S.
2002 *Tools of Memory: Investigation of the Context of Information Storage in the Halaf Period.* PhD Dissertation. State University of New York, Binghamton.

Knapp, B.A. and W. Ashmore
1999 Archaeological Landscapes: Constructed, Conceptualized, Ideational. In *Archaeologies of Landscape,* edited by W. Ashmore and B. Knapp, Blackwell.

Kohl, P.L. and Wright, R.P.
1977 Stateless Cities: The Differentiation of Societies in the Near Eastern Neolithic. *Dialectical Anthropology* 2: pp. 271-283.

Köhler-Rollefson, I.
1992 A model for the development of Nomadic Pastoralism on the Transjordanian Plateau. In *Pastoralism in the Levant: Archaelogical Materials in Anthroplogical Perspectives Monographs in World Prehistory 10,* edited by O. Bar-Yosef and A. Khazanov, pp. 11-18. Prehistory Press, Madison.

Kopytoff, I.
1986 The Cultural Biography of Things. In *The Social Life of Things,* edited by Appadurai. Cambridge University Press, Cambridge.

Korfmann, M.
1982 *Tilkitepe.* Tubingen.

Koster, H.
1977 The ecology of pastoralism in relation to changing patterns of land use in the northeast Peloponnese. Ph.D. Dissertation. Department of Anthropology, University of Pennsylvania.

Kotsakis, Kostas
1999 What Tells Can Tell: Social Space and Settlement in the Greek Neolithic. In *Neolithic Society in Greece,* edited by P. Halstead. Sheffield Academic Press, Sheffield.

Kristiansen, K.
1991 Chiefdoms, states, and systems of social evolution. In *Chiefdoms: Power, Economy and Ideology*, edited by T.K. Earle, pp. 16-43. Cambridge University Press, Cambridge.

Küchler, S.
1987 Malangan: art and memory in a Melanesian society. *Man* 22(2): pp. 238-255.

1993 Landscape as Memory: The Mapping of Process and its representation in a Melanesian Society. In *Landscape Politics and Perspectives*, edited by B. Bender. Berg, Providence, pp.85-106.

Kuijt, I.

1996 Negotiating Equality through ritual: A consideration of Late Natufian and PrePottery Neolithic A Period Mortuary Practices. *Journal of Anthropological Archaeology* 15: pp. 313-336.

2000a People and Space in Early Agricultural Villages: Exploring Daily Lives, Community Size and Architecture in the Late Pre-Pottery Neolithic. *Journal of Anthropological Archaeology* 19: pp. 75-102.

2000b Keeping the Peace: Ritual, Skull Caching and Community Integration in the Levantine Neolithic. In *Life in Neolithic farming communities,* edited by I. Kuijt I., Plenum Press, New York.

2001 Place, Death and the Transmission of Social Memory in Early Agricultural Communities of the Near Eastern Pre-Pottery Neolithic. In *Social Memory, Identity and Death: Anthropological Perspectives on Mortuary Rituals, Archaeological Papers of the American Anthropological Association Number 10*, edited by M. Chesson.

Kuijt, I. (Ed.).
2000 *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation.* Plenum Press, New York.

Kuzucuoglu, C., M. Karabiyikoglu, M. Fontugne, J.Ff. Pastre and T. Ercan
1997 Environmental Changes in Holocene Lacustrine Sequences from Karapinar in the Konya Plain (Turkey). In *Third Millennium BC Climate Change and Old World Collapse*, edited by H.N. Dalfes, G. Kukla and H. Weiss, pp 451-463. Springer-Verlag, Berlin.

Layton, R.
1995 Relating to the country in the Western Desert. In *The Anthropology of Landscape. Perspectives of Place and Space,* edited by E. Hirsch and M. O'Hanlon, pp. 210-231. Clarendon, Oxford.

Lebeau, M.
1987 Aperçu de la céramique de la phase 'Oueili (Obeid 0). In *Larsa (10e campagne 1983) et 'Oueili (4e campagne 1983) Rapport Préliminaire,* edited by J.-L. Huot, pp. 95-120. Editions Recherche sur les Civilisations, Paris.

LeBlanc, S.
1971 *Computerized, Conjunctive Archaeology and the Near Eastern Halaf.* PhD Thesis. Washington University.

LeBlanc, S and Watson, P.J.

1973 A Comparative Statistical Analysis of Painted Pottery from Seven Halafian Sites. *Paléorient* 1: pp. 119-136.

Lees, S. and D. Bates
1974 The Origins of specialized nomadic pastoralism. *American Antiquity* 39: 187-93.

Levi-Strauss, Claude
1968 *The Origin of Table Manners, vol.3 of Introduction to a Science of Mythology.* Harper and Row, New York.

1969 *The Elementary Structures of Kinship.* Beacon Press, Boston.

Lewin, R.
1993 *Complexity: Life at the edge of chaos.* J.M. Dent, London.

Lyonnet, B.
2000 *Prospection archéologique du Haut-Khabur occidental.* Institut Français d'Archéologique du Proche-Orient, Beyrouth.

Mallowan, M.E.L. and Rose, J.C.
1935 Excavations at Tall Arpachiyah, 1933. *Iraq* 2: pp. 1-178.

Mann, Nancy
1992 The Cultural Anthropology of Time: A Critical Essay. *Annual Review of Anthropology* 21: pp. 93-123.

Marfoe, L., Copeland, L. and Parr, P.
1981 Arjoune 1978: Preliminary Investigation of a Prehistoric Site in the Homs Basin, Syria. *Levant* 13: pp. 1-27.

Matthews, R.
2000 The Early Prehistory of Mesopotamia 500000 to 4500 BC. *Subartu V.* Brepols Publishers, Turnhout.

2003 *The Archaeology of Mesopotamia: Theories and Approaches.* Routledge, London and New York.

Mauss, M.
1967 *The Gift. The Form and Reason for Exchange in Archaic Societies.* Norton, N.Y.

McCorriston, J.

1992 The Halaf Environment and Human Activities in the Khabur Drainage, Syria. *Journal of Field Archaeology* 19: pp. 315-333.

Mellaart, J.

1967 *Catal Hoyuk. A Neolithic town in Anatolia.* Thames and Hudson, London.

1975 *The Neolithic of the Near East.* Thames and Hudson, London.

1978 *Earliest Civilisations of the Near East.* Thames and Hudson, London.

1981 The Prehistoric Pottery from the Neolithic to the Beginning of EB4. In *The River Qoueiq, Northern Syria and its Catchment*, edited by J. Matthers, pp. 131-326. BAR International Series 98,Oxford.

Merpert, N.I. and Munchaev, R.M.

1969 Excavations at Yarim Tepe, first preliminary report. *Sumer* 25: pp. 125-132.

1971 Excavations at Yarim Tepe 1970. *Sumer* 27: pp. 9-22.

1973a Early agricultural settlement in the Sinjar Plain, northern Iraq. *Iraq* 35: pp. 97-113.

1973b Excavations at Yarim Tepe 1972. Fourth preliminary Report. *Sumer* 29: pp. 3-16.

1984 Soviet Expedition's research at Yarim Tepe III: settlement in north-western Iraq, 1978-1981. *Sumer* 43: pp. 54-68.

1987 The Earliest Levels at Yarim Tepe I and Yarim Tepe II in northern Iraq. *Iraq* 49: pp. 1-37.

1993a Yarim tepe I. In *Early Stages in the Evolution of Mesopotamian Civilization. Soviet Excavations in Northern Iraq*, edited by N. Yoffee et al., pp. 73-114. Publisher? City?

1993b Yarim Tepe II: The Halaf Levels. In *Early Stages in the Evolution of Mesopotamian Civilization. Soviet Excavations in Northern Iraq,* edited by N. Yoffee et al., pp. 128-162.

1993c Yarim Tepe III: The Halaf Levels. In *Early Stages in the Evolution of Mesopotamian Civilization. Soviet Excavations in Northern Iraq,* edited by N. Yoffee et al., pp. 163-205.

1993d Burial Practices of the Halaf Culture. In *Early Stages in the Evolution of Mesopotamian Civilization. Soviet Excavations in Northern Iraq,* edited by N. Yoffee et al., pp. 207-223.

Merpert, N.I., Munchaev, R.M. and Bader, N.D.
1976 Investigations of the Soviet Expedition to Iraq 1973. *Sumer* 32: pp. 25-62.

1977 The investigations of the Soviet Expedition to Iraq 1974. *Sumer* 33: pp. 65-104.

1978 Soviet investigations in the Sinjar Plain. *Sumer* 34: pp. 27-70.

1981a Investigations of the Soviet Expedition in northern Iraq. *Sumer* 37: pp. 22-54.

1981b The Soviet Expedition's surveys in the Sinjar Valley. *Sumer* 37: pp. 55-95.

Metcalf, P. and Huntington, P.
1991 *Celebrations of Death: The Anthropology of Mortuary Ritual, 2nd edition.* Cambridge University Press, Cambridge.

Mizoguchi, K.
1993 Time in the Reproduction of Mortuary Practices. *World Archaeology* 25, pp.223-45

2002 *An Archaeological History of Japan 30.000 BC to AD 700.* University of Pennsylvania Press. Philadelphia.

Molleson, T., Campbell, S.
1995 Deformed Skulls at Tell Arpachiyah: The Social Context. In *The archaeology of Death in the Ancient Near East,* edited by S. Campbell et al., pp. 45-55.

Moore A.M.T., Hillman G.C. and Legge A.J. (Eds.).
2000 *Village on the Euphrates. From Foraging to Farming at Abu Hureyra.* Oxford University Press, Oxford.

Morphy, H.
1991 *Ancestral Connections.* Chicago University Press, Chicago.

1995 Landscape and the Reproduction of the Ancestral Past. In *The Anthropology of Landscape. Perspectives of Place and Space,* edited by E. Hirsch and M. O'Hanlon, pp. 184-209.

Mortensen, P.
1982 Patterns of interaction between Seasonal Settlement and Early Villages in Mesopotamia. In *The Hilly Flanks and Beyond,* edited by T.C. Young, P.E.L. Smith, and P. Mortensen, pp. 207-229. University of Chicago Press, Chicago.

Munchaev, R.M. and Merpert, N.I.
1971 The archaeological research in the Sinjar valley (1971). *Sumer* 27: pp. 23-32.

Munchaev, R.M., Merpert, N.I. and Bader, N.O.
1984 Archaeological studies in the Sinjar Valley 1980. *Sumer* 43: pp. 32-53.

Murdock G. P.
1949 *Social Structure.* MacMillan, New York.

Murdock, G.P. and S.F. Wilson
1972 Settlement Patterns and Community Organization: Cross Cultural Codes 3. *Ethnology* 11; pp. 254-95.

Nelson, M.C., Schachner, G.
2002 Understanding Abandonments in the North American Southwest. *Journal of Archaeological Research*, vol.10, no.2.

Netting, R. McC.
1993 *Smallholders, Householders: Farm families and the ecology of intensive sustainable agriculture.* Stanford University Press, Stanford.

Nieuwenhuyse, O.
1995 The transitional Fine Ware Pottery of Tell Sabi Abyad. *Orient Express* 1995(1): pp. 15-16.

1996a Late Neolithic Settlement in the Upper-Khabur, Syria. *Orient Express* 1996(1): pp. 16-17.

1996b The Later Halaf Period (Balikh IIIC) on Tell Sabi Abyad, Syria. *Orient Express* 1996(2): pp. 52-53.

2000 Halaf Settlement in the Khabur Headwaters. In *Prospection Archeologique Haut-Khabur Occidental volume 1*, edited by B. Lyonnet, pp.150-260

Nissen, H.

1988 *The Early History of the Ancient Near East, 9000-2000 BC.* Chicago, University of Chicago Press.

O'Shea, J.

1977 Early irrigation agriculture in Mesopotamia. In *Problems in Economic and Social Archaeology*, edited by G. de G. Sieveking, I.H. Longworth, and K.E. Wilson, pp. 109-135. Duckworth, London.

Oates, J.

1972 Prehistoric settlement patterns in Mesopotamia. In *Man, Settlement and Urbanism,* edited by P.J. Ucko, R. Tringham, and G.W. Dimbleby, pp. 299-310. Duckworth, London.

1973 The background and the development of early farming communities in Mesopotamia and the Zagros. *Proceedings of the Prehistoric Society* 39: pp. 147-181.

1978 Religion and ritual in sixth-millenium BC Mesopotamia. *World Archaeology* 10: pp. 117-124.

1980 Land-use and population pressure in prehistoric Mesopotamia. In *L'Archéologie de l'Iraq; Perspectives et Limites de l'Interpretation Anthropolgque des Documents,* edited by M.T. Barrelet, pp. 303-314. CNRS, Paris.

1982 Archaeological Evidence for settlement pattterns in Mesopotamia and eastern Arabia in relation to possible environmental conditions. In *Palaeoclimates, Palaeoenviroments and Human Communities in the Eastern Mediterranean Region in Later Prehistory,* edited by J.L. Bintliff, J.L. and W. van Zeist, pp. 359-393. BAR International Series 133, Oxford.

1983 Ubaid Mesopotamia reconsidered. In *The Hilly Flanks and Beyond,* edited by T.C. Young, P.E.L. Smith and P. Mortensen, pp. 251-283. University of Chicago Press, Chicago.

1987a The Choga Mami Transitional. In *Préhistoire de la*

Mesopotamie, edited by J.-L. Huot, pp. 163-180. CNRS, Paris.

1987b Ubaid Chronology. In *Chronologies in the Near East: Relative and Absolute Chronologies 16,000-4,000 BP,* edited by O. Aurenche, J. Evin, and F. Hours, pp. 473-482. BAR International Series 379, Oxford.

Olivier, L.

2001 Duration, Memory and the Nature of the Archaeological Record. In *It's about time. The concept of time in archaeology*, edited by H. Karlsson, pp 61-70. Bricoleur Press, Goteborg.

Olwig, K.

1993 Sexual Cosmology; Nation and landscape at the Conceptual Interstices of Nature and Cultures: or what does landscape really mean? In *Landscape: Politics and Perspectives,* edited by B. Bender, pp. 307-343. Berg, Oxford.

Oppenheim, M.F. von

1933 *Tell Halaf. A new Culture in Oldest Mesopotamia*. London.

1943 *Tell Halaf. Vol 1 Die Prahistorische Funde.* Berlin.

Özdoğan, M. and Başgelen, N. (Eds.).

1999 *Neolithic in Turkey: the Cradle of Civilization, new Discoveries.* Arkeoloji ve Sanat Yayinlari, Istanbul.

Özdoğan, M., and Özdoğan, A.

1993 Pre Halafian Pottery of Southeastern Anatolia with special reference to the Çayönü sequence. In *Between the Rivers and Over the Mountains,* edited by M. Frangipane et al.

Patterson, T.

1989 Pre-State Societies and Cultural Styles in Ancient Peru and Mesopotamia: a comparison. In *Upon this foundation: the Ubaid reconsidered,* edited by Henrickson and I. Thuesen. Copenhagen, Museum Tusculanum Press: 293-321.

Pearson M.P.

1999 *The Archaeology of Death and Burial.* Texas University Press, College Station.

Pearson, M.P. and C. Richards
1994 Ordering the World: perceptions of Architecture, Space and Time. In *Architecture and Order*, edited by M.P.Pearson and C. Richards, pp. 1-38. Routledge, London and New York.

Pearson, M.P. and C. Richards (Eds.).
1994 *Architecture and Order: Approaches to Social Space.* Routledge, London and New York.

Peebles, C.S. and S.M. Kus
1978 Some Archaeological Correlates of Ranked Societies. *American Antiquity* 42: pp. 421-448.

Perkins, A.L.
1949 *The Comparative Archaeology of Early Mesopotamia SAOC 25,* University of Chicago Press, Chicago.

Perkins, D.
1969 Fauna of Çatal Hüyük: evidence of early cattle domestication in Anatolia. *Science* 164: pp. 177-179.

Perles, C.
1999 The Distribution of Magoules in Eastern Thessaly. In *Neolithic Society in Greece,* edited by P. Halstead. Sheffield Academic Press, Sheffield.

2001 *The Early Neolithic in Greece.* Cambridge University Press, Cambridge.

Plog, S. and Hautman, J.L.
1990 Chronology construction and the study of culture change. *Journal of Field Archaeology* 17: pp. 439-456.

Price, T.D. and Gebauer A.B. (Eds.).
1995 *Last Hunters, First Farmers: New Perspectives on the Prehistoric Transition to Agriculture.* School of American Research Press, Santa Fe.

Pryor, F.
1995 Abandonment and the Role of Ritual Sites in the Landscape. *Scottish Archaeological Review* 9(10): 96-109.

Rapoport, R.A.
1999 *Ritual and Religion in the Making of Humanity*, Cambridge University Press, Cambridge.

Redman, C.L.

1978 *The Rise of Civilisation.* W.H Freeman, San Francisco.

Renfrew, C. and Dixon, J.E.
1976 Obsidian in Western Asia: a review. In edited by G. de G. Sieveking, pp. 137-150. Longworth.

Renfrew, C., Dixon, J.E and Cann, J.R.
1966 Obsidian and early cultural contact in the Near East. *Proceedings of the Prehistoric Society* 32: pp. 30-72.

1968 Further analysis of Near Eastern obsidian. *Proceedings of the Prehistoric Society* 34: pp. 319-333.

Richards, C. and Thomas, J
1984 Ritual Activity and Structured Deposition in Later Neolithic Wessex. In *Neolithic Studies,* eds. R. Bradley and J. Gardiner. BAR series 133. Oxford: BAR 189-218.

Richards, C.
1996 Monuments as landscape: Creating the Center of the World in Late Neolithic Orkney. *World Archaeology* 28(2): pp. 190-208.

Roaf, M.
1990 *Cultural Atlas of Mesopotamia and the Ancient Near East.* Equinox, Oxford.

Roberts, N.
1983 Age, Paleoenvironments and Climatic Significance of Late Pleistocene Konya Lake, Turkey. *Quaternary Research* 19: pp. 154-171.

Roberts, N. and Wright, H.E. Jr.
1993 Vegetational, Lake-level and Climatic History of the Near East and Southwest Asia. In *Global Climates Since the Last glacial Maximum,* edited by H.E. Wright Jr. et al., pp. 194-200. University of Minnesota Press, Minneapolis.

Rollefson, G.
2000 Ritual and Social Structure at Neolithic 'Ain Ghazal. In *Life in Neolithic Farming Communities,* edited by I. Kuijt. Plenum Press, New York.

Rosen, Arlene Miller
1986 *Cities of Clay; The Geoarchaeology of Tells.* University of Chicago Press, Chicago and London.

1998 Early to Mid-Holocene Environmental Changes and their Impact on Human Communities in Southeastern Anatolia. In *Water, Environmnet and Society in Times of Climatic Change*, edited by A.S. Issar and N. Brown, pp. 215-240. Kluwer Academic Publishers, Netherlands.

Rosenberg, M. and Togul, H.
1991 The Batman archaeological site survey 1990. *Anatolica* 17: pp. 241-254.

Rosman A. and Rubel P.G.
1971 *Feasting with Mine Enemy-Rank and Exchange among Northwest Coast Societies.* Columbia University Press, New York.

Rossignol, J. and L. Wandsnider, L. (eds)
1992 *Space, Time and Archaeological Landscapes*. Plenum Press, New York.

Rothman, M.
1994 Seal and Sealing Findspots, Design, Audience and Function. In *Archives Before Writing*, edited by Ferioli, P., Fiandra, E., Fisore, G. and Frangipane, M., pp. 97-121, Universitá di Roma.

Rowlands, M.
1993 The Role of Memory in the Transmission of Culture in Conceptions of Time and Ancient Society. *World Archaeology* 25(2).

Safar, F., Ali Mustafa, M. and Lloyd, S.
1981 *Eridu.* SOAH, Baghdad

Samson, R. (Ed.).
1990 *Social Archaeology of Houses*. Edinburgh University Press, Edinburgh.

Schlanger, Sarah H.
1990 Artifact Assemblage Composition and Site Occupation Duration. In *Perspectives on Southwestern Prehistory*, edited by P.E. Minnis and C.L. Redman, pp. 103-121. Westview Press, Boulder.

Schacht, R.M.
1984 Contemporaneity problem. *American Antiquity* 49:678-695.

Schmandt-Besserat, D.
1978 The Earliest Precursor of writing. *Scientific American* 238:6
1996 *How Writing Came About.* Austin: University of Texas Press

Schmidt, K.

1999 Boars, ducks and foxes- the Urfa Project 99. *Neo-Lithics* 3: pp.12-15.

2000 Gobekli Tepe, southeastern Turkey. A Preliminary Report on the 1995-1999 excavations. *Paleorient* 26(1): pp. 45-54.

Seeden, H.

1982 Ethnoarchaeological reconstruction of Halafian Occupational Units at Shams ed-Din Tannira. *Berytus* 30: pp. 55-95.

Service, E.

1962 *Primitive Social Organisation.* Random House, New York.

Shennan, S.J.

1978 Archaeological `culture': an empirical organization. In *The Spatial Organisation of Culture*, edited by I. Hodder, pp. 113-140. Duckworth, London.

1989 Introduction: archaeological approaches to cultural identity. In *Archaeological Approaches to Cultural Identity*, edited by S.J. Shennan, pp. 1-32. Unwin, London.

Sherratt, A.

1981 Plough and pastoralism: Aspects of the secondary products revolution. In *Pattern of the past: Studies in Honour of David Clarke* edited by I. Hodder, G. Isaac, N. Hammond. Cambridge University Press, Cambridge, pp. 261-305.

1983 *The Neolithic period in Bulgaria in its European context*, edited by A.G. Poulter, pp. 188-198.

Snead, J.E.

1995 *Beyond Pueblo Walls: Community and Competition in the Northern Rio Grande, A.D. 1300-1400,* PhD dissertation, Department of Anthroplogy, University of California, Los Angeles.

Speiser, E.A.

1935 *Excavations at Tepe Gawra. Vol. 1.* University of Pennsylvania Press.

Stein G.

1994a Introduction part II. The organizational Dynamics of Complexity in Greater Mesopotamia. In *Chiefdoms and Early States in the Near East. The Organizational Dynamics of Complexity. Monographs in World Archaeology 18*, edited by G. Stein and M.S. Rothman, pp. 11-22. Prehistory Press, Madison.

1994b Economy, ritual and power in Ubaid Mesopotamia. In *Chiefdoms and Early States in the Near East. The Organizational Dynamics of Complexity. Monographs in World Archaeology 18,* edited by G. Stein and M.S. Rothman. Prehistory Press, Madison.

1994c Segmentary States and organizational variation in early complex societies: a rural perspective. In *Archaeological views from the countryside. Village communities in early complex societies*, edited by G.M. Schwartz and S.E. Falconer, pp. 10-18. Smithsonian Institution Press, Washington D.C.

Stevanovic, M.

1997 The Age of Clay: the social dynamics of house construction. *Journal of Anthropological Archaeology* 16: pp. 334-95.

Stone, G. D.

1993 Agricultural Abandonment: A Comparative Study in Historical Ecology. In *Abandonment of Settlements and Regions: Ethnoarchaeological and Archaeological Approaches,* edited by C.M. Cameron and S.A. Tmka, pp. 74-81. Cambridge University Press, Cambridge

Stordeur, D.

2000 New Discoveries in architecture and symbolism at Jerf el Ahmar, 1997-1999. *Neo-lithics* 1/00: pp. 1-4.

Strathern, M.

1988 *The gender of the gift.* University of California Press, Los Angeles.

Tacon, P. S.C.

1994 Socializing Landscapes: the long-term implications of signs, symbols and marks on the land. *Archaeology in Oceania* 29: pp. 117-129

Thomas, J.

1993 The Politics of Vision and the Archaeologies of Landscape. In *Landscape: Politics and Perspectives,* edited by B. Bender. Berg, Oxford, pp. 19-48.

1996 *Time, Culture and Identity. An Interpretive Archaeology.* Routledge, London.

2000 Death, Identity and the Body in Neolithic Britain. *Journal of the Royal Anthropological Institute* 6(4): pp. 653-680.

Thomas, N.
1991 *Entangled Objects: Exchange, Material Culture and Colonialism in the Pacific.* Harvard University Press, Cambridge.

Tilley, C.
1994 *A phenomenology of Landscape. Places, Paths and Monuments.* Berg, Oxford.

2001 Thinking Places, review of "An Archaeology of Natural Places by Richard Bradley", *Cambridge Archaeological Journal* 11 (1), pp. 130-132

Tobler, A.L.
1950 *Excavations at Tepe Gawra. Vol. 2.* University of Pennsylvania Press.

Todd, I.
1976 *Çatal Hüyük in Pespective.* Cummings Publishing Co, Menlo Park.

1980 *The Prehistory of Central Anatolia I: The Neolithic Period.* Goteborg.

Torrence, R.
1986 *Production and Exchange of Stone Tools: Prehistoric Obsidian in the Aegean.* Cambridge University Press, Cambridge.

Tringham, R.
1991 Households with Faces: the Challenge of Gender in Prehistoric Architectural Remains. In *Engendering Archaeology: Women and Prehistory*, edited by J. M. Gero, and M.W. Conkey, pages? Blackwell Publishers, Oxford.

1994 Engendered Places in Prehistory. *Gender, Place and Culture* 1(2): pp. 169-203.

1995 Archaeological Houses, households, housework and the home. In *The Home: Words, Interpretations, Meanings and Environments,* edited by D.N. Benjamin, D. Stea and D. Saile, pp. 79-107. Aldershot: Avebury.

Tuan, Yi-Fu
1977 *Space and Place. The Perspective of Experience.* University of Minnesota Press, London.

Turner, V.
1969 *The Ritual Process: Structure and Anti-Structure.* Cornell University Press, Ithaca.

Uerpmann, H-P.
1982 Faunal remains from Shams ed-Din Tannira, a Halafian Site in Northern Syria. *Berytus* 30: pp. 3-52.

van Gennep, Arnold
1960 *The Rites of Passage.* Chicago University Press, Chicago.

van Zeist, W. and Bottema, S.
1982 Vegetational history of the eastern Mediterranean and the Near East during the last 20,000 years. In *Palaeoclimates, Palaeoenviroments and Human Communities in the Eastern Mediterranean Region in Later Prehistory,* edited by J.L. Bintliff and W. van Zeist, pp. 277-321. BAR International Series 133, Oxford.

Van Zeist, W., Woldring, H., Stapert, D.
1975 Late Quaternary Vegetation and Climate of Southwestern Turkey. *Palaeohistoria* XVII, 53-143.

Varien, M.D.
1999 *Sedentism and Mobility in a social Landscape: Mesa Verde and Beyond.* The University of Arizona Press, Tucson.

Verhoeven, M.
1999 *An Archaeological Ethnography of a Neolithic Community: Space, Place and Social Relations in the Burnt Village at Tell Sabi Abyad, Syria.* Nederlands Historisch-Archaeologisch Instituut te Istanbul, Leiden.

2000 Death, fire and Abandonment: Ritual Practice at Late Neolithic Tell Sabi Abyad, Syria. *Archaeological Dialogues* 7(1): pp. 46-83.

2002 Ritual and Ideology in the Pre-pottery Neolithic B of the Levant and Southeast Anatolia. *Cambridge Archaeological Journal* 12(2): pp. 233-258.

Verhoeven, M. and Peter M.M.G Akkermans (Ed.).
2000 *Tell Sabi Abyad II; The Pre-Pottery Neolithic B Settlement.* Nederlands Historisch-Archaeologisch Institut, Istanbul.

Vertesalji, P. P.

1989 Transitions and Transformations of Early Chalcolithic Painted Pottery in Mesopotamia. In *Upon this foundation; the Ubaid reconsidered,* edited by E.F. Henrickson et al., pp. 227-242.

Vertovec S.
1993 Potlatching and the Mythic Past;A re-evaluation of the Traditional Northwest Coast American Indian Complex. *Religion* 13: pp. 323-344.

Vita-Finzi C & Higgs E.S.
1970 Prehistoric economy in the mount carmel area of Palestine: site catchment analysis. *Proceedings of the Prehistoric Society* 36: pp. 1-37.

von Thunen, J.H.
1966 *Isolated State*. Pergamon Press, London.

von Wickede, A.
1984 Çavi Tarlasi. *Istanbuler Mitteilungen* 39: pp. 112-133.

von Wickede, A. and Herbordt, S.
1988 Çavi Tarlası: Bericht über die Ausgranbungs kampagnen 1983-1984. *Istanbuler Mitteilungen* 34: pp. 112-134.

von Wickede, A. and Mısır, A.
1985 Çavi Tarlası 1984 Kazı Kampanyası. *Kazi Sonuclari Topalantisi* pp. 103-109.

Wagstaff, J.M. (ed)
1987 *Landscape and Culture: Geographical and Archaeological Perspectives*, Basil Blackwell, New York.

Watkins, T.
1987 Kharabeh Shattani : An Halaf Culture Exposure in Northern Iraq. In *Prehistoire de la Mesopotamie,* edited by J.-L. Huot, pp. 221-230. CNRS, Paris.

Watkins, T. and Campbell, S.
1986 *Kharabeh Shattani I, Occasional Paper 14*. Department of Archaeology, Edinburgh.

1987 The chronology of the Halaf culture. In *Chronologies in the Near East: Relative and Absolute Chronologies 16,000-4,000 BP*, edited by O. Aurenche, J. Evin, and F. Hours, pp. 427-464. BAR International Series 379, Oxford.

Watson, P.J.
1980 The vertebrate fauna from Arpachiyah. *Iraq* 42: pp. 152-153.

1983a The Soundings at Banahilk. In *Prehistoric Archaeology along the Zagros Flanks,* edited by L.S. Braidwood et al., pp. 545-613. University of Chicago, Chicago.

1983b The Halafian Culture: a Review and Synthesis. In *The Hilly Flanks and Beyond,* edited by T.C. Young, P.E.L., Smith and P. Mortensen, pp. 231-250. University of Chicago Press, Chicago.

1995 Explaining the Transition to agriculture. In Price and Gebauer eds., pp. 21-37.

Watson, P.J. and S.A. LeBlanc
1990 *Girikihaciyan: a Halafian Site in Southeastern Turkey, Monograph 33*, Institute of Archaeology, University of California, Los Angeles.

Wattenmaker, P.
1997 Kazane Hoyuk 1995: Excavations of an early city. *Kazi Sonuclari Toplantisi* 15. pp 177-192.

Wattenmaker, P. and Misir, A.
1994 1992 Excavations at Kazane Hoyuk. *Kazi Sonuclari Toplantisi* 12. pp 177-192.

Weiner, A.
1992 *Inalienable Objects.* University of California Press, Berkeley.

Weiss, H.
1983 Excavations at Tell Leilan and the origins of North Mesopotamian cities in the third millennium BC. *Paléorient* 9(2): pp. 39-52.

Wilk, R.R and Netting, R. McC.
1984 Households: changing forms and functions. In *Households: Comparative and Historical Studies of the Domestic Group*, edited by R. Netting, R. Wilk and E. Arnold. University of California Press, Berkeley.

Wilkinson, T.J.
1990a Soil development and early land use in the Jezira region, Upper Mesopotamia. *World Archaeology* 22: pp. 87-103.

1990b The development of settlement in the north Jezira between the 7th and the 1st millennia BC. *Iraq* 52: pp. 49-62.

1990c *Town and Country in South Eastern Anatolia 1. Settlement and Land use at Kurban Hoyuk and other sites in the Lower Karababa Basin.* Oriental Institute Publications, Chicago.

1994 The Structure and Dynamics of Dry-Farming States in Upper Mesopotamia. *Current Anthropology* 35(5): pp. 483-520.

2000 Regional Approaches to Mesopotamian Archaeology: The Contribution of Archaeological Surveys. *Journal of Archaeological Research.* Vol.8. no.3

2003 *Archaeological Landscapes of the Near East.* Arizona

Wilkinson, T.J. and D. Tucker

1995 *Settlement Development in the North Jezira Iraq: A Study of the Archaeological Landscape.* Warminster.

Wilson, P.J.

1988 *The Domestication of the Human Species.* Yale University Press, New Haven.

Wobst, H.M.

1977 Stylistic behavior and information exchange. In *For the Director: Research Essays in Honor of James B. Griffin, Michigan Anthropological Papers 61,* edited by C.E. Cleland, pp. 317-342. University of Michigan, Ann Arbor.

Woolley, C.L.

1934 The prehistoric pottery of Carchemish. *Iraq* 1: pp. 146-162.

Wright, G.A.

1969 *Obsidian Analysis and Prehistoric Near Eastern Trade: 7500 to 3500 BC. Museum of Anthropology, Anthropological Papers 37.* University of Michigan, Ann Arbor.

Wright, H.E. Jr.

1993 Environmental Determinism in Near Eastern Prehistory. *Current Anthropology* 34(2): pp. 458-469.

Wright, H.T.

1981 The southern margins of Sumer: an archaeological survey of the areas of Eridu and Ur. In *Heartland of Cities*, edited by R.M. Adams, pp. 295-345. University of Chicago Press, Chicago.

Wright, H.T. and Johnson, G.A.
1975 Population, exchange, and early state formation in southwestern Iran. *American Antiquity* 77: pp. 267-289.

Wright, H and S. Pollock
1986 Regional socio-economic organization in southern Mesopotamia: the middle and later fifth millennium. In *Prehistoire de la Mesopotamie*, edited by J.-L. Huot. Paris, Editions du CNRS.

Yasin, W.
1970 Excavation at Tell es-Sawwan 1969: Report on the sixth season of excavations. *Sumer* 26: pp. 39-42.

Yener, A, C. Edens, T. Harrison, J. Verstraete and T.J. Wilkinson
2000 The Amuq Valley Regional Project 1995-1998. *American Journal of Archaeology* 104 (2), pp. 163-220

Yoffee, N.
1993 Mesopotamian Interaction Spheres. In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq,* edited by N. Yoffee et al., The University of Arizona Press, pp. 257-269.

Yoffee, N. and J. Clark (eds)
1993 *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*. The University of Arizona Press.