

Craft Specialisation and its Relation with Social Organisation in
the Late 6th to Early 4th Millennium BCE of the Southern Levant
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Résumé

L'organisation économique, politique et sociale dans le Levant Sud est souvent abordée, mais rarement définie ou analysée. Or, la spécialisation artisanale va de pair avec la complexité sociale. Après avoir défini la spécialisation et proposé un cadre méthodologique permettant de démontrer ce phénomène, l'article analyse brièvement les différentes conditions de production des biens de consommation courants et d'objets de prestige. L'étude de la situation dans le Levant Sud du Néolithique récent au Chalcolithique se fonde principalement sur l'analyse de la céramique et des métaux. La standardisation de la céramique au cours de cette période est présentée ; toutefois, production métallurgique et production céramique ne répondent pas aux mêmes règles, dans la mesure où le métal a joué un rôle différent dans la création des structures sociales et la définition des identités. La structure politique du Levant Sud à la fin de cette période semble avoir été fondée sur le principe des chefferies, même si des formes d'organisations sociales plus individualistes paraissent avoir existé dans plusieurs régions.

Abstract

Economic, social and political organisation in the Southern Levant are often stated, but seldom defined or explained. Craft specialization and social complexity are connected. After a definition of craft specialisation and an attempt to define archaeologically recognizable evidence for it, a brief discussion of the different conditions of production for consumer goods and prestige goods follows. The concrete situation in the Southern Levant from the Late Neolithic to the Late Chalcolithic is studied with pottery and metal as the main materials. The standardisation of pottery through time is presented. Metal production follows different rules than pottery, as most of it has played a different role in the social structure and creation of identity. The political complexity of the Southern Levant at the end of the period can be described in terms of chiefdoms, although the individual form of social organisation in the various regions will have differed.

CRAFT SPECIALISATION AND ITS RELATION WITH SOCIAL ORGANISATION IN THE LATE 6th TO EARLY 4th MILLENNIUM BCE OF THE SOUTHERN LEVANT

S. KERNER

Abstract: *Economic, social and political organisation in the Southern Levant are often stated, but seldom defined or explained. Craft specialization and social complexity are connected. After a definition of craft specialisation and an attempt to define archaeologically recognizable evidence for it, a brief discussion of the different conditions of production for consumer goods and prestige goods follows. The concrete situation in the Southern Levant from the Late Neolithic to the Late Chalcolithic is studied with pottery and metal as the main materials. The standardisation of pottery through time is presented. Metal production follows different rules than pottery, as most of it has played a different role in the social structure and creation of identity. The political complexity of the Southern Levant at the end of the period can be described in terms of chiefdoms, although the individual form of social organisation in the various regions will have differed.*

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Keywords: *Southern Levant; Israel; Jordan; Late Neolithic; Yarmoukian; Chalcolithic; Wadi Rabah; Ghassulian; Craft Specialisation; Pottery; Metal; Social Complexity; Identity.*

Mots-clés: *Levant Sud; Israël; Jordanie; Néolithique récent; Yarmoukien; Chalcolithique; Wadi Rabah; Ghassoulien; Spécialisation artisanale; Céramique; Métal; Complexité sociale; Identité.*

The focus of research on the political and social organisation in the Near East has largely concentrated on the Neolithic period, particularly the Pre-Pottery Neolithic B, or the much later time of state formation. The social and political forms of organisation in between (typically called chiefdoms) are still

neglected, although there has been far more research since the late seventies.¹ Particularly in the Southern Levant many

1. DRENNAN and URIBE, 1987; KERNER, 2001a; LEVY, 1995; MILLS, 2004; ROTHMAN, 1994; STEIN, 1994; YOFFEE, 1993.

researchers are still merely concerned with chronological and methodological questions, although important, they will not help in understanding the wider implications of the social development. The form of social-political organisation in the Late Chalcolithic is often postulated as being a chiefdom, without many attempts to characterise the precise circumstances of that particular form of complex society. But chiefdoms can vary widely in their form and characteristics, and while there have been some attempts to arrive at a more precise definition of them,² the field of economy has probably not been used to its full advantage. This article will try and look at craft specialisation as one aspect of the economic history of the Southern Levant and its dialectical relationship with the social organisation of these societies.³ I will first look in some depth at the definitions and meaning of (craft) specialisation and its connection with social organisation, and then into the more precise form it takes in the Late 6th to Early 4th millennium BCE in the Southern Levant.

SPECIALISATION

DEFINITIONS

Since J.-J. Rousseau and A. Smith, numerous authors, starting with H.L. Morgan,⁴ K. Marx,⁵ and É. Durkheim,⁶ and continuing between others with G.V. Childe,⁷ M. Sahlins⁸ and many others, have dealt with the subject of specialisation. More recently J.E. Clark and W.J. Parry,⁹ C. Costin,¹⁰ G.J. Stein¹¹ and P. Wattenmaker¹² have been considering the questions of specialisation, its organisation and its connection to political complexity. The nature of their relationship needs

to be investigated, as it is not clear whether social complexity is a precondition for specialisation or specialisation furthers the development of social and political complexity, or if their relationship is dialectical. This is part of a far more complex relationship between many factors; specialised production is only a small part of the economic make-up of a society and the economy is only one factor influencing the social and political development of a society. And the dialectical relationship between social constraints and economic movement as they are so succinctly explained by *e.g.*, K. Flannery and J. Marcus¹³ are not denied here either. The renewed interest in material, after a longer period where archaeological evidence was mostly considered to be readable as and compatible to text, is now far more noticeable in the literature. This renewed interest can come in the form of materiality or materialist approaches¹⁴ and with T.K. Earle¹⁵ and E.M. Brumfiel,¹⁶ social and economic factors are in this article understood to play a decisive role in the development of social complexity. A hermeneutic and not a deterministic approach is needed to come to an explanation of social development, but here only one aspect of such a complete picture is dealt with in more detail.

Several definitions of craft specialisation have been given, although many are too general for the purpose of archaeology: “(...) a specialist is an individual who holds a position or vocation because he (sic) controls a set of skills that most of his communal fellows do not control.”¹⁷ Other definitions are more concerned with the recognition of the phenomenon and are limited to more modern economic considerations: “The degree of a craft specialization is best determined as variability in output *per capita* for a given product within the population sampled.”¹⁸ Several definitions however point out the necessity of surplus:

“1) The manufacture of certain craft products is limited to a small percentage of the total number of individuals in any given community. 2) These individuals devote some of their productive time to the manufacture of these craft products. 3) Consequently, they must withdraw themselves from some or all of the basic subsistence activities. 4) Thus, they must obtain some or all of their subsistence goods through some kind of exchange system for their craft products.”¹⁹

2. LEVY, 1981 has tried this first with the establishment of a 2-tier settlements system in the Negev, which has often been criticised, probably most recently by WINTER-LIVNEH *et al.*, 2010.

3. I would like to dedicate this paper to G. Dollfus, whose help and support for my work in Jordan and Chalcolithic archaeology in general I most gratefully acknowledge and whose many lively discussions and willingness to exchange material have enlarged my and the general knowledge of that period.

4. MORGAN, 1877.

5. MARX, 1977.

6. DURKHEIM, 1933.

7. CHILDE, 1964: 30.

8. SAHLINS, 1958.

9. CLARK and PARRY, 1990.

10. COSTIN, 1991.

11. STEIN, 1994.

12. WATTENMAKER, 1994.

13. FLANNERY and JOYCE, 1993: 353-355.

14. DEMARRAIS *et al.*, 2005.

15. EARLE, 2004.

16. BRUMFIEL, 1992.

17. RODGERS, 1966: 410.

18. TOSI, 1984: 23.

19. EVANS, 1978: 115; similar but much shorter, are the following definitions: “(...) exclusive activity in which a person or small group performs for long periods demanding economic support for their living (...)”

Clark and Parry have a broader notion of specialisation that includes economic as well as social components:

“We consider production specialized if the consumers are not members of the producer’s household. (...) In essence, craft specialization is production of alienable, durable goods for nondependent consumption. (...) *Ad hoc* specialization is sporadic, informal production of goods for exchange, as the term implies.”²⁰

The definition of specialisation used here is:²¹ specialisation is a regulated, constant, and possibly controlled production system, in which few producers produce the goods (or services) for many consumers. Producers and consumers rely on this exchange, the producers, to defray at least part of their livelihood with it and the consumers as they are able to get goods (or services) which they cannot produce or procure otherwise.

CHARACTERISTICS OF SPECIALISATION

These definitions mention several important elements of specialisation: one of the most important points for the determination of specialization is the question of surplus production within a society. Already Childe stipulated that a certain surplus production is a necessary condition for the existence of specialists, but it is very difficult to speculate about the exact amount of the required surplus. This will be directly related to the type of specialisation (full-time specialists would need much more support than part-time specialists, who continue to contribute directly to their own subsistence.)²² The social organisation and size of the society in question, and thus its ability to feed a smaller or larger number of specialists has also to be considered. But generally surplus production is seen as a necessary but not sufficient condition for specialization.²³

The personal skills of an individual play a role in determining who is a specialist, but they are also not a sufficient condition to explain the phenomenon of specialisation. The terms

(KRISTIANSEN, 1987: 33). “Economic specialization can be defined as the investment of labor and capital toward the production of a particular good or service, in that a person produces more of that commodity, and less of others, than he or she consumes.” (ALCHIAN and ALLEN, 1969: 204)

20. CLARK and PARRY, 1990: 297-298. This definition explicitly excludes inalienable objects, pointing already to the importance to establish specific production patterns for specific goods.

21. The definition is partly based on COSTIN, 1991.

22. A contrary opinion is given by ROWLANDS, 1971, who assumes that metal specialists could be “paid” through *e.g.*, greater prestige and no surplus production would be necessary.

23. See also CLARK, 1995: 271 *sq.*

“craft person” and “craft specialist” can express the difference between personal skills on one side and social function on the other. The first is also capable of producing *e.g.*, “a beautiful object” but lacks the wider social and economic meaning of a specialist.²⁴

The percentage of specialist producers and goods produced in a specialised mode in the overall production, the form of the exchange between producers and consumers and their mutual dependence are all important elements in shaping the exact form of specialisation, but will not be discussed in detail here.

Specialisation is not a state in which any person or unit either is or is not, but a continuum with gradual changes. It can therefore not be measured in absolute but only in relative terms. “Craft specialization is here considered an adaptive process (rather than a static structural trait) in the dynamic interrelationship between a nonindustrialized society and its environment.”²⁵ The degree of specialisation can be measured comparing individual producers, producer groups or entire societies. It can be considered both diachronically and synchronically, which will be done later in this article.

Some products continue to be made in an unspecialised form; Wattenmaker gives an example from Turkey, where certain ceramics are made by specialists, while others—mainly cooking pots—continue to be produced by individual households.²⁶ Other activities such as food preparation remain much longer in the area of domestic production and continue as unpaid reproduction labour even until today.

ARCHAEOLOGICAL EVIDENCE FOR SPECIALISATION

Specialised production can be proven through direct evidence such as production remains (workshops) or work tools, but also (and more often) through indirect evidence in the form of standardisation. Another possible indication is the near absence of mistakes in a given production; while the objects produced in a specialised mode are not necessarily beautiful, they will be the outcome of a more “professional” or successful production.

24. This is an important difference, because the ability to knit a jumper during a boring seminar at university (a common habit during the 1980s) does not make the knitter a specialist living from that exercise.

25. RICE, 1981: 219-220.

26. WATTENMAKER, 1994: 115. While one might think that such domestic goods as cooking pots will always be produced in a household context, there are examples from the Late Antique period, where cooking pots were clearly imported.

The degree of specialisation can be measured in different forms: 1. the ratio of producers to consumers for a specific product; 2. the ratio of the time, which is used in specialised production in comparison with the time used for non-specialised production; 3. the volume of all production and exchange can be used as a benchmark; 4. the degree of control over raw material also gives information about specialised production.²⁷

PRESTIGE GOODS *VERSUS* DOMESTIC GOODS

Obvious characteristics of items produced in a specialised mode are the efficiency and standardisation that has been employed for their making, as well as the quantitative increase of production of a particular commodity.²⁸ Specialisation has often (but not always) been characterised by economically meaningful behaviour.²⁹

Equally evident is often the effort invested and the care used to make certain items. Several examples from the Chalcolithic period in the Southern Levant illustrate this: normal pottery bowls are made in a simple shape with negligently applied paint, cream-bowls on the other hand are made in much smaller numbers with sophisticated exterior design and painting. Here it is the “uneconomic” behaviour that characterises the production.³⁰ Uneconomical means in this context a mode of production, which has higher energy costs such as labour, requires more and possibly complicated equipment, different materials, etc.

It thus becomes obvious that these goods underlie very different rules of production, which points to a difference in the motives of the production. A possible explanation lies in the diverse nature of the manufactured goods. In almost all societies there are more domestic goods than prestige goods (although in many cases goods can change their character dependent on the context) and they are subject to different rules and conditions of production.³¹

Goods produced in a specialised mode of production for domestic use are done in large numbers and are, therefore, as far as possible standardised and produced with little labour

per item. However, this does not advocate that modern capitalistic modes of production standards should be applied to the specialised production in the Chalcolithic period. Reaching a maximum gain, a goal now seemingly natural and inherent in any production process, cannot be accepted for a very different and much less complex society,³² where social rules influenced economic factors much more. In non-capitalist societies behaviour underlies different rules and property is not automatically positively evaluated, as reflected in the destruction of property to obtain prestige (such as the potlatch) or in mechanisms to eradicate differences in wealth *e.g.*, in the Halaf period.³³

Prestige goods transport more social information within the society and are therefore often produced with more time and effort. They show clearly that economic aspects might at times play only a very minimal role in prehistoric (and historic) production. Prestige is an elusive quantity that gives some people power and authority within their environment. Signs of prestige may be intangible, based on ideology or ritual,³⁴ or archaeologically not be detectable, but prestige can also be illustrated by the ownership of prestige goods. Prestige as “an ordering” element already exists in egalitarian societies and plays a role in maintaining social differences.³⁵

Prestige goods are characterised through a number of elements. 1. Prestige goods are often produced from special raw material that is either rare, or difficult to work, or hard to get, or that was transported over long distances. “Special raw material” thus does not mean automatically that it is economically expensive but it might be culturally expensive. 2. Prestige goods can have been transported over long distances themselves, regardless of the material (that can be achieved through exchange, trade, raids, etc.). 3. Prestige goods require time, their production, design and decoration is usually of a high quality. 4. The decoration of the objects is often elaborate.

A different approach to those items, which mark social inequality, is A. Weiner’s concept of inalienable possessions,³⁶ which have a number of similar characteristics to prestige items, but also some differences that might become interesting, when the Chalcolithic case is discussed. These key attributes of inalienable objects are that they are not exchanged in the normal networks, that the knowledge of their production pro-

27. ARNOLD, 1987: 62; EHRENREICH, 1991; archaeologically, some of those conditions might be difficult to prove. And many excavations are not published to a standard that makes firm statements possible.

28. BERNBECK, 1994: 64; CLARK and PARRY, 1990; HODDER, 1981; RICE, 1981: 221; UNDERHILL, 1991.

29. ARNOLD, 1987; EVANS, 1978.

30. CLARK and PARRY, 1990; PEREGRINE, 1991.

31. CLARK and PARRY, 1990: 293; COSTIN, 1991: 12; RICE, 1981: 222; SINOPOLI, 1988: 580.

32. Authors like Rice and Costin partly argue in that direction, as has been criticised by *e.g.*, SHANKS and TILLEY, 1987: 188. In non-complex societies, objects can have varying meanings in different spheres. An item can thus have a practical as well as a prestige or ritual importance.

33. AKKERMANS and SCHWARTZ, 2003.

34. PAUKEAT, 1992; ROBB, 1999.

35. STEINHOF and REINHOLD, 1996; MEILLASSOUX, 1973: 52.

36. WEINER, 1992.

cess is handed down along specific chains (and the production is often gender specific) and that they play a role in identity authentication and thus is hierarchy building (or defeating).

CONDITIONS OF PRODUCTION

The discussion above shows that prestige or inalienable goods are subject to different conditions of production than domestic items, therefore the production process of both commodities is most likely also different. One approach to this problem deals with the useful distinction between attached and independent specialists. Independent specialists produce goods for everybody (fig. 1), and need customers for their goods. Attached specialists produce goods that carry important social information on top of their practical value, under the control of a person or elite group.³⁷

When an elite within the society arises, the needs for prestige goods to differentiate themselves (and possibly a small group of followers) from the society at large might increase and assist the development of attached specialist. The prestige goods play a role in the daily reconfirmation of roles and communal understanding. Attached specialists produce for the elite under the control of this very elite, so they work under completely different conditions from independent specialists. The prestige objects have a high prestige, but sometimes little practical use and even more important the elite, which want these prestige objects, will control production and distribution of these goods precisely because the uncontrolled spread of these objects would ruin the underlying principle and be thus counterproductive. It is conceivable however that, especially in societies whose hierarchical structures are not yet formalised, one and the same person can be an independent and an attached producer. In addition, independent and attached specialists exist in the same society producing different products

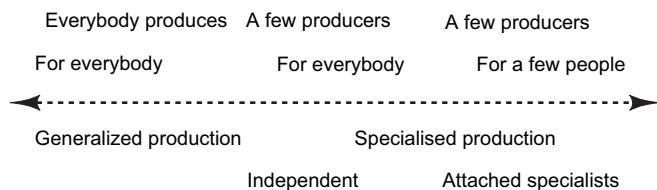


Fig. 1 – Model of Craft Production.

37. BRUMFIEL and EARLE, 1987: 5; CLARK and PARRY, 1990; COSTIN, 1991. This does not exclude, however, that other commodities carry information as well and act as identification markers.

or products in different contexts; the two states of specialisation do not exclude each other but can even complement one another.

COMPLEX SOCIETIES AND SPECIALISATION

DEFINITIONS OF COMPLEX SOCIETIES

The original definition of chiefdoms saw them as a response to increasing organisational tasks that were likely to develop, when the subsistence production increased, surplus arose and included as a noticeable feature the redistribution of property by the chiefs.³⁸ Other assumed key features of chiefdoms were frequent armed conflicts and an altruistic quality of the chief. C. Renfrew made up a list of criteria that deals mostly with relative characteristics: relatively little internal conflict, higher productivity, etc.³⁹ And one of the key problems in the definition of chiefdoms are their fluid boundaries, which also led N. Yoffee and others to criticising the attempt to “force” these societies into strict boxed systems of evolutionary growth.⁴⁰ In the Near East, the identifications of chiefdoms reached from the Natufian period, *via* the Halaf period to the Ubaid period.⁴¹

More recently the discussions about the characteristics of chiefdoms have been taken up again. Chiefdoms are now described as “complex,” “middle range” or “intermediate level” societies.⁴² Chiefdoms are socio-political units in which the social control of the society is organised in one subsystem. This subunit is separate from the other subunits, but not further subdivided (in *e.g.* sacred and profane leadership). The levels of hierarchy are thus still limited. Chiefdoms can be divided by different criteria, which are not mutually exclusive, but can be easily connected to each other (see below). The important point is that these characteristics of chiefdoms are not either-or stages but they arrange themselves along a line and the differences are fluid (fig. 2).

Chiefdoms seem to have had a sometimes astonishing survival power, duration and stability which has been too little

38. SERVICE, 1972: 144.

39. RENFREW, 1974: 73.

40. D’ALTROY and EARLE, 1985; ROTHMAN, 1994; STEPONAITIS, 1981; WRIGHT, 1984; YOFFEE, 1993 and 2005.

41. HENRY, 1989: 209; AKKERMANN and SCHWARTZ, 2003: 150-151; WRIGHT, 1984: 72; STEIN, 1994.

42. EARLE, 1987 and 1991; FEINMAN and NEITZEL, 1984; UPHAM, 1987; YOFFEE, 2005.

emphasized in connection with the Near East. They are characterized by the control of labour, land and resources, although this control is not firmly institutionalised. The reasons for the development of these special forms of political organisation shall not be discussed here.

CONDITIONS FOR THE EMERGENCE OF SPECIALISATION

A starting point for the discussion about the relationship between craft specialisation and social organisation is given in statements such as “Intensive craft specialization is one characteristic of civilization”⁴³ and “One of the most striking things about the evolution of culture is the rapid improvement in the products of craft specialization at the point of the rise of chiefdoms.”⁴⁴ It would be possible to add numerous similar statements, however, the authors dealing with the relationship between specialisation and development of society, can be divided into two groups: those who assume that specialists, and specialisation are a prerequisite for the development of complex societies; and those who assume that only the existence of a sufficiently complex society with an elite of some kind allows the development of craft specialisation. One wonders nevertheless if the question is not possibly put wrongly, or too deeply rooted in processual (law-like) thinking. The various forms of specialisation as presented above are clearly very distinct and no single relation between forms of production and social organisation should be assumed. As has already been said, specialised production is only one aspect of the economic organisation of a society and can thus not be considered the sole reason for complex developments. Specialised and non-specialised production can co-exist and it is their relationship that determines the degree of specialisation in an economy.

The different elements of a society (especially the political and social sub-systems) do not develop in parallel stages with the economic subsystem, or may develop completely at variance in different societies. Thus, if full-time specialisation, part-time specialisation, independent and attached craft specialisation have different economic needs and pre-conditions, then it is expected that they also have different political and social needs and repercussions. So the different forms of social-political organisation, the different forms of chiefdoms, as they are the focus of this research, will also have different degrees of specialisation.

43. ARNOLD, 1975.

44. SERVICE, 1972: 148.



Fig. 2 – Different forms of chiefdoms or complex societies

THE RELATIONSHIP BETWEEN SPECIALISATION AND SOCIAL DEVELOPMENT

Most studies of craft specialisation are based on ethnographic data, archaeological evidence is just beginning to be researched. One study in particular⁴⁵ has dealt very extensively with the relationship between social complexity and the intensity of specialisation. Specialisation is measured here in the ratio of full-time specialists to part-time specialists, the number of individuals involved per category (baskets, pottery, etc.) produced in a specialised mode and the amount of categories produced by specialists. The complexity of a society was measured in this study by the following indicators: social stratification, political integration, size of the main city, population density and, finally, dependence on agriculture. Clark and Perry attempted to compare the different indicators with each other and to correlate them in different combinations with the degree of specialisation in each particular society. The results shall only be briefly mentioned here: the correlation between political organisation and specialisation shows that full-time specialists are most common in complex societies with a high degree of urbanisation (particularly in states). All three types of specialisation (independent, attached, and sponsored⁴⁶ specialists) are linked with the level of social stratification, but it is mostly attached and sponsored specialists that need a sufficiently high rate of social stratification for their existence. Population density provides no meaningful correlate for specialisation, while—hardly surprising—a connection exists between the size of the largest city and the number of specialists and professions. The correlation between the intensity of agriculture and degree of specialisation is also high, so surplus can be seen as a necessary element for full-time specialists.⁴⁷

45. CLARK and PARRY, 1990 using 53 societies based on the “Standard Cross-Cultural Sample.”

46. “Sponsored specialist” is a category which will not be taken into account here.

47. Several similar studies have been carried out by other researchers between 1950 and 1970, these studies had different focal points but lead to similar results (KERNER, 2001a). P. Peregrine deals explicitly with societies based on “prestige-good-systems” and shows that the more complex a society is, the more elaborate are its prestige goods, and more work is invested in their elaboration, “(...) Increasingly powerful elites

Independent part-time specialists were found in every society, which formed the basis of the investigation, and they were therefore not investigated further. Another study shows that the existence of social classes and metal production are closely related without having an evolutionary relationship.⁴⁸

The analyses by Costin and Rice are more archaeologically oriented, rely explicitly on socio-political factors and see a very clear correlation between different stages of social complexity (especially rank and status differentiation) and attached specialisation. In their view especially the increasing control and unequal access to raw material resources leads to increased specialization.⁴⁹ Both Rise and Costin thus follow the theory that the development of social complexity is firstly an outcome of the control over essential resources.⁵⁰ That specialisation is, however, not always tied to urbanisation, is illustrated in a number of examples dealing with relationships between cities and countryside. For Raqai in Northeastern Syria and Kurban Höyük in Southeastern Turkey, the authors show that independent specialisation does occur in rural areas and small sites. However, almost all examples given in the three publications are of societies which are in close contact to at least small state organisations.⁵¹

SPECIALISED PRODUCTION AND SOCIAL ORGANISATION IN THE SOUTHERN LEVANT

While much literature deals with the vertical divisions of society, *i.e.* the different hierarchical levels, only a few authors study the horizontal divisions of societies.⁵² The horizontal division or compartmentalisation of a society describes how functionally different units on the same hierarchical level interact. The two dimensions, vertical and horizontal organisa-

employ specialist artisans to produce exotic personal ornaments that the elite use, in turn, to further differentiate themselves from the rest of society." (PEREGRINE, 1991: 8).

48. PEREGRINE *et al.*, 2007. This study also indicates the problems that arise when different variables are put together in a law-like, evolutionary model. The model assumes "that sedentism needs pottery production as a precursor, a relationship" clearly *vice versa* in the Neolithic Levant.

49. COSTIN, 1986; RICE, 1991; see also ARNOLD, 1987.

50. One has to keep in mind that all these studies have been carried out before agency inspired approaches to the development of social complexity became more common in archaeological anthropology, and they have a tendency to search for generalisations, but since then research into economy has not been a major point. Agency inspired research tends to concentrate on questions of cult and ideology.

51. SCHWARTZ and FALCONER, 1994; SCHWARTZ, 1994; WATTENMAKER, 1990.

52. JOHNSON, 1982.

tion, are linked in various forms and the integration has political, social, economic and cultural elements. One form of such integration is the interrelatedness of specialisation (a function of horizontal division) and social complexity (a function of vertical division).

Very often one finds in the literature about the Chalcolithic of the Southern Levant that prestige goods, stratified societies and specialised production are rather unsystematically connected and one of these phenomenon is seen as evidence for the existence of the others. This is based on the erroneous assumptions that prestige goods can only occur in non-egalitarian societies, and that certain goods (beautiful or valuable items) will only be made by specialists. The first point has already been dealt with above, prestige goods are only one of several ways to express prestige, and prestige as a distinctive concept also exists already in egalitarian societies. The connection of elaborate or beautiful objects and specialisation has also to be discarded, as it is apparent that neither a high quality workmanship nor valuable material are sufficient evidence for specialisation.

CHRONOLOGICAL FRAME

Late Neolithic to Middle Chalcolithic (6500-4500 BCE)

In the Yarmukian, Wadi Rabah and Middle Chalcolithic period, which are treated here together, because the knowledge about certain factors is still rather minimal, no obvious prestige objects have been identified. As long as so few complete excavation reports from this period are published this is a preliminary statement. The architecture from Sha'ar Hagolan⁵³ points to extensive families living together without any signs of different status between the families (but with differentiation inside the families). No central buildings or public works in any of the sites have been identified, although a certain amount of planning can be ascertained. A beginning of economic organisation might be witnessed by the presence of stamp seals or tokens from the Early Chalcolithic period, since the introduction of seals is often associated with general economic changes, either with changing ideas about private property or with the beginning of administrative burden.⁵⁴

53. GARFINKEL and MILLER, 2002.

54. BOURKE, 2002 and see the discussion about the stamp seals from Sabi Abyad, particularly Level 6. K. Duistermaat makes a clear functional distinction between tokens and seals, where the latter (as in Sabi Abyad, Level 6) show the possible beginning of ideas about private property (not necessarily of an individual) in a society (DUISTERMAAT, forthcoming).

The number of figurines and other symbolic finds seems to decrease from the Late Neolithic to the Middle Chalcolithic,⁵⁵ but the possible range of symbolic expression increases, as not only figurines but also applications on pottery appear. A purely hypothetical interpretation of this development may indicate a greater “privacy” in the symbolic expression of at least the Early Chalcolithic period, compared to the large, very visible buildings of the Pre-Pottery Neolithic and the rather common “coffee bean figurines” from the Pottery Neolithic period.

Late Chalcolithic (4500-3800 BCE)

The architecture of the Late Chalcolithic period follows in most geographical regions the same principle.⁵⁶ Small houses with 1-3 rooms and a courtyard form the typical domestic structure and in the very hot, arid climate of the Negev subterranean structures can also be found. The typical architectural ensemble can be seen both *e.g.* in Teleilat Ghassul and Shiqmim, and in a somewhat modified form even in the Golan. There are size differences between the buildings in each site, but they do not seem to be significant enough to allow an interpretation of wealth differentiation. In some places, such as Ghassul, Abu Hamid, Pella, and Sahab, numerous storage pits have been found. In the Golan, large storage vessels seem to take the place of the pits.⁵⁷

Only from Teleilat Ghassul and partly Shiqmim⁵⁸ are clearly functionally differentiated areas known, in other sites as in Abu Matar, craft activities have been carried out in domestic contexts.

In several sites (such as Teleilat Ghassul, Gilat, Ein Gedi and others) public buildings have been found. They are built on a smallish scale, and can in size not be compared to the rather large and labour intensively built temples of the contemporary Late Ubaid period. While these cultic buildings illustrate public cult, other phenomenon indicate the existence of private cultic activities. There are numerous objects of symbolic value, possibly used to express on one hand a common “Late Chalcolithic Levantine” identity, but also showing clear signs of regional consciousness and possibly more private cultic activities (*e.g.*, ivory objects in the Negev, basalt stands in the Golan,

and wall paintings in the Jordan Valley). The number of stamp seals has also increased.⁵⁹

POTTERY PRODUCTION

Direct evidence for pottery production in the form of pottery kilns, storage of raw materials or tools is relatively seldom to be found in the periods studied here. Indirect evidence, however, can be found much more frequently. The most important characteristic of pottery, which is produced by independent specialists, is the standardisation and more efficient production of the products.⁶⁰ Standardised vessel forms, standardised surface treatment and decoration as well as better quality of the fabric (choice and treatment of raw material) and form (an increased number of items leads to greater “professionalism” and a certain uniformity) can be found.

The conditions of the production for pottery used as a prestige object or primarily as information carriers⁶¹ are far more difficult to determine. They do not need to meet any criteria of standardisation or efficient production. One can thus formulate certain expectations concerning the characteristics of pottery produced in certain modes:⁶² unspecialised pottery production should be characterised by a clear lack of manufacturing skills and an inferior quality (uneven firing, many wasters, very asymmetric shapes, etc.); by a large variability in a fabric, shape and decoration (no standardisation of size or composition of fabric); by little homogeneity on even a local level (households should differ in their products).

Low level specialisation should show other characteristics: the overall quality should increase; the fabrics and the shapes should be more standardised and be more clearly defined;⁶³ a weak correlation of fabric and form should exist in some forms; the increasingly standardised pottery should have a larger distribution area.

And finally advanced specialisation should be recognised by better production techniques (combined with larger technical

55. But again the very limited amount of excavated square meters must be taken into account. The decorated pebbles from some sites might have to be taken into account here too.

56. BOURKE, 2000; see also E.B. Banning’s article in this volume.

57. See the article by Z. Kafafi in this volume.

58. In Shiqmim the production remains also seem to be distributed over a number of places (GOLDEN, 2009: 289).

59. SEATON, 2008: 155.

60. This does not allow the opposite diagnosis that all non standardised pottery is made in household production.

61. As already pointed out, all pottery carries information and helps in strengthening *e.g.* the identity of the group using it, but the degree can differ.

62. These expectations are based on numerous pottery studies, between others: BLACKMAN *et al.*, 1993; COSTIN, 1986; FEINMAN *et al.*, 1984; HAGSTRUM, 1985; RICE, 1981; UPHAM *et al.*, 1981.

63. The use of relative terms is unavoidable here as the whole process is not characterised by hard and clear evolutionary steps, but by gradual changes and developments in different directions (quite similar to Yoffee’s model of social development, YOFFEE, 1993: fig. 6.6).

skills); by individual fabrics being significantly standardised and recognizable quality differences; by the increased use of non-local raw materials; by the standardisation of pottery forms (types) in *e.g.* size groups, and possibly a clearer correlation between forms and function; by correlations between certain fabrics and forms; by different “classes” of pottery with clearly different distribution patterns (regional groups). Prestige or luxury goods, most likely produced by attached specialists, should be technologically different and have different decorations (quantity, quality of design and composition) as they are destined to carry different information.

All dimensions of pottery—fabric, shape and decoration—should be treated separately, as they might follow different rules and influences. Decoration can *e.g.* carry information more easily, and can also show the influence of structure over tradition or *vice versa*.⁶⁴

Standardisation of Pottery from the Late Neolithic to the Late Chalcolithic

The Late Neolithic pottery is all handmade,⁶⁵ tends to have irregular forms and thicker walls than later pottery. Most fabrics are described as “crumbly” and “friable” and very poorly defined with large variations in quantity and quality of temper,⁶⁶ for which the wares from Jericho can be taken as a typical example: 11 wares were defined for the Pottery Neolithic A, which show 50 variations.⁶⁷ The material is characterised by the use of local clay and local temper.

The forms of the pottery are either basic geometric shapes such as open bowls with slightly rounded sides or only slightly restricted Hole-mouth-jars; or simple combined shapes such as round bodied vessels with wide, open necks; there are hardly any shapes with corner points or points of sharp inflection. This might be connected to the not very well prepared clay and coarse temper, either of would not permit an elastic fabric. The overwhelming majority of the vessels are of middle-size, only a limited amount falls into the small or large category⁶⁸ and more than 2/3 of the vessels are open.⁶⁹

The fabric changes towards the Early Chalcolithic/Wadi Rabah pottery are limited. The fabric definitions are slightly better in a number of sites (Jericho, Abu Hamid), and sometimes non-local clays were used for certain preferred qualities.⁷⁰ The pottery is overwhelmingly made by coiling and numerous mat-impressions show that the production technique has improved. Most mat-impressions come from round, braided mats, which show that the vessel stood in the centre of the mat, so that the mat could be turned during the production.⁷¹ If the mats had been used purely as underground for drying pots, the impressions should come from all parts of the mat. If the mats have on the other hand been used as a pre-form of a *tournette*, then the impressions should always come from the centre of the mat, as they do.

The vessel shape of the Early and Middle Chalcolithic are more complex than those of the earlier period. Carinated body shapes are more common,⁷² and generally a more expansive repertoire of shapes can be witnessed, although the variations in each shape do not develop uniformly.⁷³ Churns, cornets and spouts appear for the first time during the Early Chalcolithic. N. Ali suggests that the pottery in Abu Hamid was produced in specialised households during the Middle Chalcolithic period.⁷⁴

In the Late Chalcolithic the fabrics are surprisingly similar in all sites and include a fine and a coarse buff and fine as well as coarse, red or red-gray ware. In some sites cream-ware appears as a fifth fabric, mostly used for a small number of very specific vessels. These fabrics are narrowly defined, in large sites such as Teleilat Ghassul as well as in small sites like Abu Snesleh, so each fabric is standardised to a certain degree. Most excavation reports also mention that the mineral temper has rounded edges, a sign which could point to a longer storage period for the material. Many vessels have mat-impressions on the outside of the base and several bowls (from the Jordan Valley and the Negev) show characteristics of being partly wheel-finished.⁷⁵ The distribution of these particular vessels point to an export of small V-shaped bowls from the Negev to the Jordan Valley.

The form repertoire of the Late Chalcolithic is distinctively larger and contains also a higher number of specific vessels

64. NIEUWENHUYSE, 2006; HODDER, 1991; BERNBECK, 1999.

65. The preferred technique is coiling, but drawing is also reported, and in Ain Rahub basket impressions exist on the outside of three vessels (KAFABI, 1990b: 2).

66. ANATI *et al.*, 1973: 93; BANNING *et al.*, 1994: 37; BOURKE, 1997; FRANKEN, 1974; KAFABI, 1990a; OBEIDAT, 1995: 18-25.

67. KENYON and HOLLAND, 1982: 6-9.

68. DOLLFUS and KAFABI, 1993: fig. 1; GARFINKEL, 1999.

69. Only the repertoires from 'Ain Ghazal and Wadi Ziqlab have more restricted than open vessels.

70. LOVELL, 1999: fig. 4.60; LOVELL *et al.*, 2007.

71. KERNER, 2001a: table 5.1; see also FRANKEN, 1974: 188; CROWFOOT, 1938: 3.

72. GOPHER *et al.*, 1992: figs. 1.3 and 5; KAPLAN, 1969: figs. 4.2 and 5.1.

73. The variations of one shape (jars) decrease *e.g.* in Jericho (KENYON and HOLLAND, 1982), but increase in Munhata (GARFINKEL, 1992).

74. ALI, 2005: 103.

75. CROWFOOT, 1938; GILEAD, 1995; GILEAD and ALON, 1988: 127; MACDONALD, 1932: 5; ROUX, 2003; ROUX et COURTY, 1997.

than in the periods before and might therefore allow hypothesizing about the function of some of these pottery shapes. While it is very difficult to come to specific informed guesses, more general assumptions are possible. The large percentage of small V-shaped bowls⁷⁶ and the considerable amount of cornets in some sites in the Late Chalcolithic repertoire indicate a change towards individual consumption.⁷⁷

The relationship between particular fabrics and shapes becomes very pronounced, this is particularly true for the “preparation and serving vessels” such as large, flat basins, large bowls, hole-mouth-jars, open and large jars, which are mostly made from a similar middle-course fabric,⁷⁸ vessels with a spout, lug-handle jars, cornets and small vases on the other hand are nearly always made from a finer and denser fabric. The best examples come from Abu Matar and Safadi, where *e.g.* the large churns are always made from the very fine fabric 5c and this fabric is only used for these vessels, thus a mutual reciprocity exists.⁷⁹

The production technique of the V-shaped bowls points towards a more effective production method, symbolised both by the wheel finishing technique and use of mats as possible *tournettes*. The size distribution of some vessels indicates a tendency for standardisation, not only have all V-shaped bowls a very similar shape, they tend to come in many sites in two or three size-groups. The smallest variant has a diameter between 8 and 15 cm (with a concentration between 10 and 13 cm) and a height up to 9 cm,⁸⁰ the next group is between 16 and 24 cm and a height up to 13 cm, and finally the largest bowls are above 30 cm diameter and have a height of *ca* 15 cm. These size groups are the same for the wheel-finished bowls as well as the purely handmade bowls from small sites such as Abu Snesleh.

The decoration is perhaps the clearest indicator in the development of standardisation: from complex compositions in the Late Neolithic to very simple or no decoration at all in the Late Chalcolithic,⁸¹ mirroring the development from the contemporary Early to Late Ubaid periods. The Late Neolithic

Yarmukian jars and bowls required up to several hundred different gestures to finalise the decoration, the Middle Chalcolithic pottery from Tel Tsaf is painted with motives that require certain labour. The Late Chalcolithic pottery is not only decorated in only a small percentage, the decoration itself is very simple and consists in most cases of a small painted band along the rim.

Special Vessels

There are other pottery items, which show conspicuous characteristics setting them apart from the standardised production described above. They start in the Late Neolithic with the so-called Yarmukian jars, which exist only in small numbers, are elaborately and work-intensively decorated⁸² and are in Munhata made from special clay.⁸³ The clay would give them a lighter outside, a tendency also seen in small percentages of vessels in Abu Zureiq and ‘Ain Ghazal.⁸⁴ The Early Chalcolithic pottery is often characterized by the red, lustrous slip, which can be found on some vessels, but the average amount of vessels slipped in that way is actually around 6%, which again sets these vessels apart from the mass of the pottery.

In the Late Chalcolithic there are several particular vessel shapes that point to a specific importance, possibly a symbolic meaning, for those vessels. The so-called torpedo-jars appear only in Gilat, but have been made from clay from different regions⁸⁵ and seem to have been brought specifically to the site (possibly containing olive oil). Such a pattern requires potters, who knew the requested shape for the particular circumstances at Gilat, even though they worked in other regions of the Southern Levant.⁸⁶ And another vessel shape of seemingly large importance outside the purely domestic sphere is the so-called churn, which exists again in three different size groups: these size groups might indicate very different functions. The churns occur in a miniature size, normal and very large size, and it is the very large variety that shows a high correlation between fabric and form, being nearly always made from “cream ware.” Most of the examples found do not seem to have a domestic purpose (while the “normal” sized churns might well have had such a purpose). The form of a churn is also

76. In Safadi and Abu Matar between 50 and 58% (COMMENGE-PELLERIN, 1987 and 1990), in Shiqmim around 75% (LEVY and MENAHEM, 1987), in Teleilat Ghassul *ca* 60% in Level C (LOVELL, 1999: fig. 4.62).

77. See also the argument for Gilat by COMMENGE-PELLERIN, 2006: 437-443.

78. See KERNER, 2001a: 102-109.

79. COMMENGE-PELLERIN, 1987: fig. 11 and 1990: fig. 12.

80. This relates to material from the sites Azor, Ben Shemen, Abu Matar, Safadi, Shiqmim, Horvat Beter, Abu Hamid, Tell Fendi, Neve Ur and Abu Snesleh; less clear: sites in Wadi Gaza, and no small bowls have been found in Grar.

81. See in more detail KERNER, 2001b.

82. GARFINKEL, 1999; KERNER, 2001b.

83. It is the clay group CK1 and LSI, which might come from the coastal area (GOREN, 1992: 341).

84. ANATI *et al.*, 1973: 97; KAFAFI, 1995.

85. COMMENGE-PELLERIN, 2006; GOREN, 2006.

86. The situation can be in some ways compared to the Susa-beakers that are part of the grave goods in the necropolis in Susa, but had been produced in different sites on the Susa Plain (POLLOCK, 1983).

Table 1 – Overview of standardisation in fabric, shape and decoration development from the Late Neolithic to the Late Chalcolithic.

	Late Neolithic	Early Chalcolithic	Middle Chalcolithic	Late Chalcolithic
Number of fabrics	More than 3	More than 3	Unknown	5 and more
Definition of fabrics	Weakly defined	Weakly defined	Definition recognisable	Clear definition of fabrics
Definition of shapes	Weakly defined	Definition recognisable	?	Clear definition of shapes
Size categories in shapes	Non existent	Non existent	Non existent	For some shapes
Correlation between fabric and shape	For one shape	Weak	For some shapes	For most shapes
Amount of decoration	13-20%	6-26%	?	5-35%
Labour per decoration	Very high on few vessels	Generally less	High on few vessels	Low on many vessels

used in anthropomorphic and zoomorphic vessels, and there the miniature form is the chosen one. It is thus rather clear that churns, at least some of them, are also special (ritual) vessels, which were most likely used in circumstances related to food processing or food providing rituals (as the famous Gilat lady might illustrate).

Summary

The development of fabrics, shapes and decoration shows a clear path to standardisation and more precisely defined items (table 1). The “experimentation” with different temper and local clays in the Late Neolithic decreases through the Chalcolithic, while on the other hand non-local resources for temper are more often used through the Chalcolithic. Nothing in the Late Neolithic or earlier Chalcolithic periods points towards a specialist mode of production. This changes during the Late Chalcolithic period, where the standardisation of several pottery traits, mass-production of some vessels and increase in sheer numbers indicate the existence of independent specialists for pottery production. The number of these specialists must have remained limited, because large parts of Late Chalcolithic pottery, particularly the jars, storage jars and others show little or no signs of standardisation of any kind, efficient production or any other mark of specialist production. It can thus be assumed that village specialists existed for the production of certain items, such as V-shaped bowls, while many other items were still manufactured in household production.

One phenomenon remains constant through time and that is the use of one particular fabric for “special” shapes, as can be seen in the light clay used for the Yarmukian jars in the Late Neolithic of Munhata and the cream ware bowls and large

churns of the Late Chalcolithic period. This is evidence for the social considerations in pottery production, where purely economic reasoning would fall short of a sensible explanation.

The torpedo jars with the required knowledge of a specific form (over distances) and the large churns with their specific fabric (in each site) and their most likely ritual function indicate production characteristics, which might point towards attached specialists or independent specialists producing these vessels under certain circumstances and conditions. It is in the moment impossible to form a clear picture about the control under which these production processes might have happened.

SPECIALISED PRODUCTION AND METAL

The second material for which a study of the production pattern has proven informative is metal. This is not the place to summarise the extensive research about metallurgy in the Southern Levant, nor is there space to debate all aspects of it, the discussion will thus focus on those aspects of the metallurgical problem, which are of importance for the questions of craft specialization and social-political organisation. After an initial discussion of diffusion and import of many metallurgical objects during the early years of research, there is now a general agreement that the production of the metallurgical objects was located in the Southern Levant.⁸⁷ The indisputable reasons for this lie in the symbolic language of the

87. I would not go so far to establish a paradigm of Levantine chronological supremacy in metallurgical production (THORNTON, 2009), but nobody seriously assumes that during the Late Chalcolithic period metal objects had been imported (ANFINSET, 2010).

metal objects, which corresponds closely to that of other material categories (such as pottery, ossuaries and basalt stands). Another reason lies in the existence of at least some production sites in the region and the identification of local material inside some metallurgical finds.⁸⁸

The copper material from the Late Chalcolithic Southern Levant shows three highly significant dichotomies:

1. The finds consist of *ca* 82% of mace heads, standards, cylinders or baskets (the so-called prestige objects) and of *ca* 18% of adzes, awls (the so-called tools) wires and production remains.
2. The majority of so-called prestige items are made from arsenic (nickel/antimony) copper, which was most likely imported (or at least some components of it). The so-called tools are on the other hand nearly completely made from local copper-ore (most likely from Wadi Feinan).⁸⁹ Both groups of artefacts are not only made from different raw material, they are also produced by different methods. While the so-called tools are mostly made in open moulds, the prestige objects are cast in the lost-wax-method.⁹⁰
3. Nearly all production remains stem from the not arsenic (antimony/nickel) containing ore, while there are very few production remains from imported ore/alloy. The production remains are also from a geographically limited area.

From the beginning of the research most authors have argued that the high quality of the metal finds, particularly the Nahal Mishmar finds, points to specialists as producers.⁹¹ Although the quality of the work is actually not always that high,⁹² and it would not be a sufficient argument for a specialised production, there are several points arguing for such an assumption.

Some characteristics of the metal production allow us to form a hypothesis about the production pattern. There is first of all archaeological evidence of workshops, which are not distributed evenly through the region, and also not evenly in the sites themselves. This means that the ratio of producers compared to consumers will have been very low. Some metal objects such as the mace heads show a certain standardisation

of dimensions,⁹³ while others are very clearly highly individualised objects (standards). For the production of both kinds of objects (prestige items and tools), particularly the former one, a high level of specialised and technological knowledge is required. One has also to assume that a certain control of the resources existed.

The production was carried out far from the local ore deposits, only in villages in the Negev (fig. 3). In the villages such as Abu Matar and Shiqmim⁹⁴ production remains of pure copper ore and small amounts of alloyed copper with very low rates of impurities, which could point to the use of scrap alloy together with the local material in a mix, have been found. There is so far no sign for the production involving mostly the imported, arsenic containing, material. This leads to the frustrating but nevertheless existent fact that the majority of copper items have been manufactured at an unknown place.⁹⁵ Such a situation seems to point to a divided production: a controlled production, where the so-called prestige objects from imported (alloyed) material have been manufactured in the lost-wax method and secondly a less controlled production, where local (Wadi Feinan) copper ore was cast into tool-like looking items. A division of the two production modes in such a way would explain the archaeological pattern found so far, but could only be proven, when at least one production site using primarily imported ore would be found. The just described production pattern clearly leads to the assumption that attached specialists must have been involved, at least as far as the imported ore production was concerned. The very same specialists might, under not or at least less controlled conditions, have been involved in the village production of the so-called tools, which contain in some cases small amounts of impurities. Could these be left-overs from the controlled production process, which were re-used in the village production of Abu Matar and other places? They would thus have allowed the manufacture of tools, which were not very practical, but far more prestigious than their stone counterparts.

88. GOLDEN, 1998; GOREN, 2008; SHUGAR, 2000.

89. The situation is, of course, more complex as some mixed compositions exist (see also SHUGAR, 2000). For details of the situation at Wadi Feinan see HAUPTMANN, 2007.

90. TADMOR *et al.*, 1995; GOLDEN, 1998; SHUGAR, 2000.

91. ILAN and SEBBANE, 1989; KERNER, 2001a; LEVY and SHALEV, 1989; GOREN, 2008.

92. TADMOR *et al.*, 1995; GOLDEN, 1998.

93. KERNER, 2001a: 142.

94. The publication of the metal finds from Shiqmim is underway and might allow further insights, which are not possible in the moment.

95. This will be most certainly in the Levant and not somewhere else, *e.g.* closer to the possible sources of raw material. Both the chemical analysis of mace head cores (TADMOR *et al.*, 1995) and stylistic analyses (KERNER, 2001a) show this clearly. Y. Goren, who believes that it was more ritual reasons which kept the productions separate, suggests Ein Gedi as a possible candidate for such a production (GOREN, 2008).

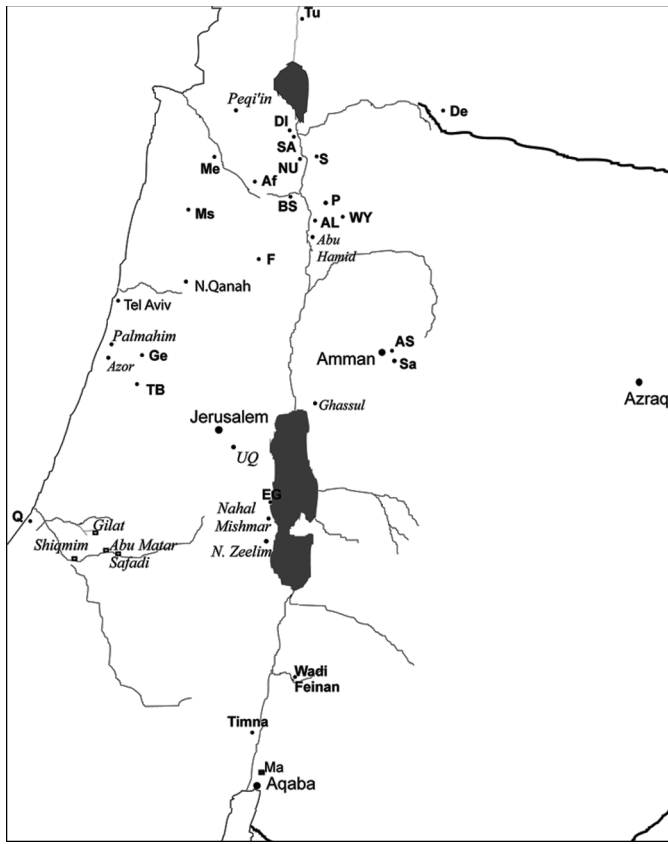


Fig. 3 – Late Chalcolithic sites with metal or metallurgical finds. Af: Affula, AL: Abu Habil, AS: Abu Snesleh, BS: Beth Shan, DI: Delhamiya, De: Dera'a, EG: Ein Gedi, F: Farah Nord, Ge: Gezer, Ma: Maqass, Me: Megiddo, Ms: Meser, NU: Neve Ur, P: Pella, Q: Qatif, S: Shuna, Sa: Sahab, SA: Scheich Ali, TB: Tuleilat Batashi, Tu: Tel Turmus, WY: Wadi Yabris.

Changes in the Metallurgical Production towards the Early Bronze Age

At the end of the Late Chalcolithic and the beginning of the Early Bronze Age, a time period between 3800-3500 BCE,⁹⁶ the pattern of metal production changed in a number of ways. For the first time, there is indisputable evidence for the production of metal objects close to the sources; the site of Wadi Fidan 4 is a small village, where workshops with crucibles, ore remains and slag have been found.⁹⁷ Contemporary with this development is a much wider geographical distribution

of sites (not necessarily an increase in the number of sites) with evidence for metal production, which now reaches from Tell Shuna North to Hujayrat al-Ghuzlan close to Aqaba. The use of alloyed copper (with arsenic, nickel or antimony) decreases in this transitional phase, while the use of Timna copper increases. With Tell Maqass and Hujayrat al-Ghuzlan exist two sites, where the production of copper ingots played a large role. Copper ore, slag, crucibles, moulds and grinding stones for pulverising the ore have all been excavated in the sites⁹⁸ and there are strong indications that the copper has been traded with Maadi in Egypt. This could actually have led to the increased Egyptian interest in the Southern Levant, which becomes visible during the Early Bronze Age I.

CONCLUSIONS

The characteristics of the Late Neolithic ceramic production speak for a generalised, unspecialised production. All other finds, including figurines and stone tools point in the same direction. There is some evidence for site-specialisation (one site concentrating on one particular group of objects), but none for the existence of independent specialists. Both the settlement pattern and the, admittedly, limited amount of architectural evidence show no signs of an inter-site hierarchy. The Late Neolithic is thus characterised by an economy based on household production and a social organisation, which points to a low level of hierarchy and intra-site planning.

The pottery production in the Early or Middle Chalcolithic shows the beginnings of a low level specialisation, possibly a household specialisation. There are still no signs of prestige goods, some more elaborately made pottery items do not really qualify as such. The beginning of economic differentiation is witnessed by the existence of stamp seals or tokens and the existence of some few vessels with a special function.

The clear tendency of the pottery production in the Late Chalcolithic can be easily combined with the characteristics of independent specialists as described above. The production increases, there is much more pottery per site in the Late Chalcolithic compared to the earlier periods. The standardisation for all technical details and decoration increased and these standards can be found over larger areas. A large amount of the pottery seems to be made under specialised conditions and the same technical standards can be found over a great area. Other pottery vessels (*e.g.*, large churns and cream bowls) made in

96. KERNER, 2008; KLIMSCHA, 2009.

97. PFEIFFER, 2009: 315.

98. KERNER *in*: BRÜCKNER *et al.*, 2002: 270-279; PFEIFFER, 2009.

the older tradition, existing since the Late Neolithic period, in that a small number of vessels are manufactured from a special fabric, always of light colour, and were supposedly used in special (ritual) circumstances.

The metal finds of the Late Chalcolithic period fit the definition of prestige items very well and might even have to be considered as representing different levels of prestige. The so-called tools might have worked as low-level prestige items, while the mace heads and standards could have been higher level prestige objects. Particularly the standards are individually decorated and show a large amount of labour invested in their production. One could also hypothesize about the question if copper mace heads and standards might have been inalienable objects, which formed part of the personhood of groups or individuals, playing a role in inter-tribal or inter-family meetings. As there is no clear distribution pattern discernible,⁹⁹ such thoughts have to remain hypothetical at the moment. The metal objects also illustrate the complex relations of production and clearly indicate the existence of attached specialists, who would have worked the imported alloy/ore under controlled conditions outside the so far known sites.

Other groups of finds, which have been considered in terms of specialisation, are the ivory objects mostly found in the Negev, some basalt items and also flint tool-shops.¹⁰⁰ The two former groups of objects come in relatively small numbers and limited distribution, thus not really allowing such an interpretation; and they should be more considered in terms of regional differentiation in cultic equipment. The flint workshops and particularly the sites producing fan-scrappers in the eastern desert will need further research before they can be used for interpretation.

The connection between specialisation and social hierarchy cannot be finally resolved. The development of independent specialists for pottery can have worked very well without any prior social inequality. The existence of most likely attached metal specialists on the other hand relies on the existence of an elite, which remains in most other aspects of Late Chalcolithic life rather shadowy. More knowledge about the distribution pattern of metal production sites and metal finds will help to clear these questions.

The Late Neolithic might be described as a simple tribal or kinship organised society, which is characterised by few community activities, a low degree of specialisation occurring only

on a regional trade base and very small social differences.¹⁰¹ The Late Chalcolithic period is clearly an example of a complex society or a chiefdom (tables 2-4), showing a clear development from the Early Chalcolithic on. The exact character of such chiefdoms is still not entirely clear, and they were certainly more than one, differing in their degree of centralisation and hierarchisation. The different forms in which chiefdoms can be described (group *versus* individual, simple *versus* complex, and staple-finance against prestige-wealth based) show that all the South Levantine Late Chalcolithic chiefdoms appear to be group oriented, simple and more likely based on staple finance than prestige-wealth, although the last point needs more elaboration. There is very little evidence for different status positions, the only possible signs of rank could be found in the metal objects. All political units would have been very small and regional, and the regionalism is the one strong characteristic for this period. The questions of public works and central institutions can only be answered tentatively with the cultic buildings mentioned above, which could form the centres of three units (around Teleilat Ghassul, Ein Gedi and Shiqmim), with Gilat taking a special role. In Ghassul a storage building might strengthen such an impression of power concentration. This might be a development relatively late during the Late Chalcolithic period, following the more private cultic habits connected to the above described finds in domestic houses. Larger ceremonies would also have been connected to these cultic buildings, although there is no evidence yet, which gives a hint towards the form of such ceremonies.

These chiefdoms seem not to be based primarily on an economic control over resources, but the role of prestige goods is very difficult to determine at the present. As long as the distribution pattern of the metal finds is so unclear, it is hardly possible to argue here with great precision. But such a control over the metal resources must have existed for the chiefdom(s) in the Northern Negev, where so far the production centres for metal (and some pottery) have been localised and where with the end of the Chalcolithic period there seems to have been an abrupt halt to a so far speedy social development. The centre of activities moves then away from the Negev into other areas of the Southern Levant, as the development of metallurgy in Hujayrat al-Ghuzlan, and to a lesser degree in Shuna North and Afridar illustrate.

99. The overwhelming majority of the metal finds come from the Nahal Mishmar hoard find.

100. ROWAN and GOLDEN, 2009: 48.

101. CREAMER and HAAS, 1985; BRAUN and PLOG, 1982.

Table 2 – Late Chalcolithic archaeological evidence for group oriented or individual oriented complex societies.

	Group-oriented chiefdom	Individual-oriented chiefdom
Number of levels of status	No positions recognisable	
Difference in status	Very little evidence, possibly some signs of different status in burials	
Signs of rank		Possibly existent in the form of different metal objects
Ceremonies	Meetings at supra-local cultic places? Personal cult in other regions	
Central institutions	Cult places ?	
Public works	Common storage in Teleilat Ghassul? Temples?	
Specialisation	Independent pottery specialists	Attached and independent metal specialists

Table 3 – Late Chalcolithic archaeological evidence for simple or complex chiefdoms.

	Simple chiefdom	Complex chiefdom
Number of levels of status	No positions recognisable	
Differences in status	Very little evidence, possibly some signs of different status in burials	
Size of group	Small (Negev, Central Jordan Valley, etc.)	
Concentration of power	No clear signs	Possibly risk management in cultic buildings
Regionalisation	Strong (different find repertoire, particularly for cultic finds)	
Specialisation	Independent pottery specialists	Attached and independent metal specialists

Table 4 – Late Chalcolithic archaeological evidence for staple finance or prestige wealth financed complex societies.

	Staple-finance chiefdom	Prestige-wealth chiefdom
Number of levels of status	No positions recognisable	
Differences in status	Very little evidence, possibly some signs of different status in burials	
Signs of rank		Possibly existent in the form of different metal objects
Central institutions	Cult places?	
Public works	Common storage in Teleilat Ghassul? Temples?	
Specialisation	Independent pottery specialists	Attached and independent metal specialists

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