IN THE SHAHRIZOR. REASSESSING THE HALAF CERAMIC TRADITIONS OF IRAQI KURDISTAN

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El artículo discute la cerámica pintada Halaf de Shahrizor, Kurdistán Iraquí. Este material se adscribe bien a la amplia tradición cultural Halaf del Norte de Mesopotamia, pero también muestra elementos distintos a escala regional. El artículo también aborda la ausencia, hasta el momento, del Early Halaf en el Norte de Mesopotamia y el papel de la cerámica pintada policroma del Halaf-Ubaid Transicional.

Neolítico final, Halaf, HUT, Kurdistán Iraquí, Cerámica.

The paper discusses the painted pottery from the Halaf period in the Shahrizor, Iraqi Kurdistan. This material generally fits well with the wider Halaf cultural tradition as known from Upper Mesopotamia but it also shows regionally distinctive elements. The paper discusses the absence so far of any trace of the Upper Mesopotamian Early Halaf and the role of the Halaf-Ubaid Transitional polychrome-painted pottery.

Late Neolithic, Halaf, HUT, Iraqi Kurdistan, pottery.

INTRODUCTION

In this contribution I would wish to discuss the Halaf pottery traditions from the Shahrizor, an intermontane valley in the Zagros piedmont of Iraqi Kurdistan (Altaweel et al. 2012). Recent surveys and excavations in this region have brought intriguing new evidence to light for local ceramic traditions during the Late Neolithic and Halaf periods (Mühl 2013; Mühl/Nieuwenhuyse 2016; Nieuwenhuyse/ Berghuijs/Mühl 2012; Nieuwenhuyse/ Odaka/Mühl 2016; Nieuwenhuyse et al. 2016). This evidence offers a complex image of (supra-) regional interaction through the medium of painted Halaf Fine Ware ceramics. On the one hand, it suggests that the Shahrizor Halaf material fits well with wider Halaf traditions as previously defined in Upper Mesopotamia (Akkermans 1993; Akkermans/Schwartz 2003; Campbell 1992; Cruells 2004, 2006, 2009; Mallowan/Rose 1935). On the other hand, aspects of its chaîne opératoire and its

decorative style are unfamiliar, especially during the final stages of the Halaf period. Moreover, some of the sub-phases we have come to know so well from Upper Mesopotamia appear to be absent in this part of the Near East, and perhaps *vice versa*. The Shahrizor Halaf is unmistakingly *Halaf*, yet it is also distinctively different.

Investigating the circumstances that brought local Late Neolithic groups to embrace the Halaf cultural idiom - and elucidating the ways they did this - is the scope of several ongoing research projects in the Iraqi Kurdistan region that have espoused an explicit focus on the Halaf period (Altaweel et al. 2012; Bonacossi/lamoni 2015; Gavagnin/lamoni/Palermo 2016; lamoni 2016a, 2016b; Kolinski 2016; Nieuwen-huyse/Odaka/Mühl 2016; Nieuwenhuyse et al. 2016; Saber et al. 2014; Tsuneki et al. 2015; Ur et al. 2013). In what follows I wish to briefly present some general results concerning the Halaf period pottery that emerged from the ongoing Shahrizor Survey project (Altaweel

Figure 1. The Shahrizor Survey Project. The distribution of later prehistoric sites (Neolithic, Ubaid and Late Chalcolithic). No. 6: Sragon. No. 56: Tell Begum (after Mühl/Nieuwenhuyse 2016).

et al. 2012). I shall discuss the apparent absence in the region of the incipient stages of the Halaf ceramic tradition. I shall continue by presenting the local painted pottery tradition dated to the chronological interval between the Halaf and Ubaid periods, the so-called Halaf-Ubaid-Transitional (HUT).

THE HALAF-PERIOD CERAMIC ASSEMBLAGE OF THE SHAHRIZOR

The first extensive synthesis of the Halaf period ceramic traditions in the Shahrizor region was provided by Ismail Hijara (1997). Hijara made use of extensive surveying across Iraq to trace Halaf settlement preferences (Directorate General of Antiquities Baghdad 1970, 1976). For the Shahrizor, this yielded precisely two sites, Tell Begum and Sragon (Fig. 1). Hijara made detailed notes of the painted ceramics collected from a deep sounding excavated at Tell Begum (Hijara 1997: Appendix I), and proposed a 'Halaf-Ubaid-Transitional' date for them, as further discussed below. However, as the primary aim of Hijara's project was to analyse site distributions and settlement patterns, his final publication did not include

a discussion of the ceramic evidence collected in these various surveys.

Beginning in 2011, the Shahrizor Survey Project has continued to discover many additional sites dated to other prehistoric periods, among which are several new Halaf sites (Fig. 1).

As with other ongoing survey projects in the Iraqi Kurdistan region, the Shahrizor Survey Project employs a systematic analysis of the collected evidence. One important aim of this and related projects is to use this evidence to reconstruct local ceramic traditions. So what does the Shahrizor survey have to say as far as the Halaf pottery is concerned?

As a first step, a basic classificatory ceramic framework was constructed. The material collected in the survey may be categorized in several broad descriptive groups, provisionally termed: *Plant-tempered Coarse Ware*, *Halaf Fine Ware*, *Halaf Coarse Ware*, and, potentially, *HUT Fine Ware* (Nieuwenhuyse/ Odaka/Mühl 2016). Evidently all of these coarse-grained categories can be, and should be, refined and sub-divided in future studies on the basis of the subtle internal variability in raw materials, technological choices during the shaping

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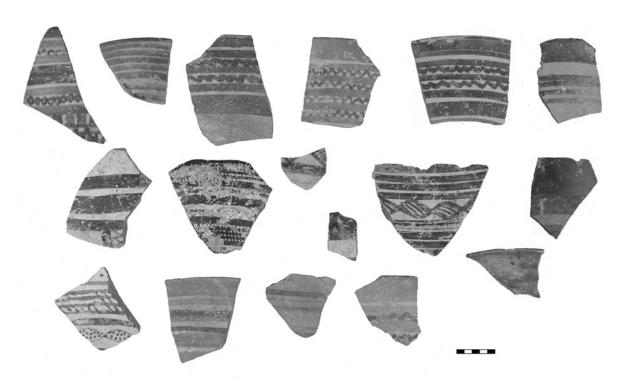


Figure 2. Examples of painted Halaf Fine Ware from the Shahrizor (image: Shahrizor Survey project).

and firing, and decorative style. Yet, for the twin purposes of presenting the regional survey evidence and facilitating inter-regional comparisons, we believe such down-to-earth, macroscopically-defined categorizations are quite useful (Ur 2010: appendix b). With the exception of the HUT Fine Ware, most of these categories would by and large correspond to groups known from elsewhere in northern Iraq, northern Syria and Southeastern Turkey.

To most scholars familiar with Mesopotamian prehistory, the achievements of participants in the Halaf cultural tradition are best exemplified by the elaborately decorated Halaf Fine Ware (HFW) they left behind. Closely comparable to Halaf pottery from across northern Iraq and Upper Mesopotamia, the HFW from the Shahrizor was made of relatively compact clay with few visible inclusions (Fig. 2). Future work should explore whether the potters employed techniques to purify the clays, for example by levigating (Rye 1981). The vessels were mostly well fired, often to a fully oxidized state that produced buffish to orange surface colours. Vessel shapes are those that are quite familiar to students of Halaf pottery from Upper Mesopotamia, including convex-sided bowls, bowls with a carinated contour and bowls with S-shaped walls. Often the bowls have pointed or flattened rims.

The painted designs, too, are overall familiar. The potters emphasized horizontal band patterns – motifs replicated by translation symmetry – encircling the vessel.

Common motifs include various types of cross hatching, circular, squared or oval cables, and undulating lines. Perhaps significantly, figurative designs have so far not been observed. At first glance the design structures of the painted Halaf pottery from the Shahrizor might look rather unsophisticated in comparison to what is known from sites elsewhere. However, we must keep in mind that the available evidence almost exclusively comes from surface collections: fragmented surface collections such as those collected at Tell Begum are likely to be biased against the preservation of complex design 'grammars'. The material tends to be severely fragmented, reducing the changes of recovering intact design structures. The strong fragmentation may also go a long way in explaining the apparent absence of figurative compositions; once broken they may easily be interpreted as fragmented geometric designs.

Interestingly, in addition to painting, for which the Halaf Fine Ware has become rightly famous, several surface-manipulative decorative techniques are found in the Shahrizor. These include incising and impressing, often in combination with the painted designs (Nieuwenhuyse/Odaka/Mühl 2016; Nieuwenhuyse *et al.* 2016; Wengrow *et al.* 2016). Finally, stunning examples of polychrome painted decoration appear to be characteristic for the final stages of the Shahrizor Halaf (see below).

Figure 3. Early Halaf (Halaf Ia) painted Halaf Fine Ware from Tell Sabi Abyad (Operation III). Quite identifiable in surveys across Upper Mesopotamia, this pottery is so far conspicuously absent from Iraqi Kurdistan (after Nieuwenhuyse in press, b).

WHERE IS THE LOCAL EARLY HALAF?

One of the results of recent work on Halaf-period surface collections in Upper Mesopotamia was the insight that fine-tuned chronological sub-divisions of the material were in fact possible (Akkermans 1993; Becker 2015; Campbell 1992; Kozbe 2013; Nieuwenhuyse 2000; Nieuwenhuyse/Wilkinson 2007). Ultimately, the analysis of surface collections combined with stratigraphic excavations may contribute to a viable local chronology for the Halaf period in the Shahrizor, or indeed for northern Iraq in general. Applied to the survey evidence this may in turn shed light on changing settlement patterns *during* the Halaf period. Here I wish to introduce our preliminary impressions concerning the first introduction of Halaf ceramic styles from the Shahrizor.

In northern Syria, southeastern Turkey and northern Iraq, scholars have identified an uninterrupted transition leading from the earlier, Pre-Halaf ceramic assemblages through a short-lived 'Transitional' stage to the Early Halaf (Akkermans 1989, 1993; Akkermans/Le Mière

1992; Akkermans/Verhoeven 1995; Campbell 1992; Cruells 2006, 2009; Cruells/Nieuwenhuyse 2005; Cruells *et al.* 2013; Le Mière/Nieuwenhuyse 1996; Nieuwenhuyse 2007; Všianský/ Mateiciucová 2017). Dated to ca. 6000-5900 cal. BC (Akkermans 2014; Cruells 2017), this transition is characterized by ceramic properties that were previously seen as typical for, and culture-historically limited to, the Standard Hassuna and Samarra ceramic traditions of Central Iraq.

Thus, the northern Syrian ceramic assemblage during the Transitional stage (also termed 'Proto-Halaf' or 'Hassuna III') was characterized by increasing amounts of painted (occasionally painted-and-incised) Fine Ware that was made of 'sandy' clays and emphasized the application of dark-coloured paints over a light surface background. Typical painted motifs included Samarra-style stepped patterns and 'dancing ladies'. By ca. 5900 cal. BC this ceramic ware evolved into something that qualifies as a very early form of Halaf Fine Ware, during a stage that specialists may recognize by the names of 'Halaf Ia', 'Balikh IIIB', or 'Incipient Halaf'.

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The point to be made here is that the earliest Halaf horizon as known from northern Syria is rather easy to identify in regional surveys (Fig. 3). In fact it has been identified in surveys across the Upper Mesopotamian realm (Akkermans 1993; Becker 2015; Cruells/Molist/Tunca 2004; Kozbe 2013; Nieuwenhuyse 2000). In contrast, the surveying in the Shahrizor has so far yielded none of the typical indices for this stage. These could have included dark-on-buff painted cream bowls carrying diagonal cross hatching (Fig. 3).

The Shahrizor material includes small quantities of ceramics that can be attributed to the Hassuna-Samarra ceramic tradition. However, the bulk of the Halaf Fine Ware would seem to date to the Middle to Late Halaf in terms of the commonly accepted Upper Mesopotamian framework. The first results emerging from surveying the Rania Plain further north reflect a similar impression (Tsuneki et al. 2015).

Only further study can establish the validity of these intriguing preliminary impressions. Several explanations may be explored if these early conclusions are supported. For instance, in contrast to the Upper Mesopotamian plains, sites from this particular stage (the Halaf la) may all be buried and invisible to modern surveys. Geomorphological work in the Shahrizor indeed attests to a very significant Holocene sedimentation (Mühl/Fassbinder 2016; Nieuwenhuyse et al. 2016). If so, this may imply that sites at the start of the Halaf were without exception small and inconspicuous, and perhaps shortlived. This would contrast with Upper Mesopotamia, where larger and more prominent tell sites existed during this phase. Alternatively, the entire valley may have been abandoned during the Halaf period. This seems rather unlikely given the agricultural potential of the valley to Early Halaf farmers. Did local Early Halaf groups shift to transhumant, pastoralist modes of subsistence?

Finally, from a ceramic-specialist perspective, it may be argued that the entire discussion is based on negative evidence. So far no stratified excavations in the broader region have facilitated the identification of a local version of a Pre-Halaf (i.e. Hassuna/Samarra) to Halaf ceramic transition. Speculating, local communities may have held on to Hassuna-Samarra styles for longer, adopting the Halaf repertoire at a later stage. They may have developed ceramic styles still unfamiliar to us specialists and which are therefore unrecognizable in surveys (Campbell 2007). Whatever explanation is eventually supported; each would portray the Shahrizor as regionally distinct during the Early Halaf stage.

HALAF-UBAID TRANSITIONAL (HUT) CERAMICS FROM THE SHAHRIZOR

In 2013 the Shahrizor Survey Project cleaned and partially re-excavated soundings from the 1960's at the 4,5 ha site of Tell Begum, with the aims of understanding the biography of this mound in broad outlines and collecting stratified ceramics to interpret the survey results. The mound appears to have been inhabited from the later Halaf period throughout the Ubaid period, and into the earlier stage of the Late Chalcolithic. Particularly well represented are the LC1-3 periods, during which the mound reached its largest extent, and the Late Halaf period, which Iraqi archaeologists in the 1960's excavated in a deep sounding through the Lower Mound (Nieuwenhuyse et al. 2016).

The earlier soundings excavated the Halaf strata to about eight metres below the present-day surface of the mound; the 2013 pilot excavations were limited to cleaning the upper three metres of this sounding. Three radiocarbon dates provide an absolute date for the re-excavated Halaf strata of around 5400 cal. BC (Odaka et al. n.d.). This fits with the absolute dates recently gained from comparable complexes excavated at Tepe Marani and Qalat Said Ahmadan (Tsuneki et al. 2015; Wengrow et al. 2016). These dates collectively fall well within the range accepted for the Upper Mesopotamian Halaf-Ubaid Transition (Campbell 2007; Campbell/ Fletcher 2010; Hours et al. 1994).

The ceramic assemblage recovered from the Halaf strata comprises two broad groups, each with a unique internal variability. Provisionally, these have been termed Halaf Fine Ware (HFW) and Halaf Coarse Ware (HCW), but it is emphasized that further work may necessitate modifications of this nomenclature. The Halaf Fine Ware from Tell Begum on the whole corresponds to the description given above for the Shahrizor painted Halaf pottery. Halaf Coarse Wares are comparatively thick-walled vessels, often having incompletely oxidised cores. For HCW the potters used clay containing many small mineral inclusions and sometimes small plant particles (Nieuwenhuyse/Odaka/Mühl 2016).

At first sight, the range of vessel shapes and decorative designs correspond reasonably well to what is known in northern Iraq and northern Syria as Halaf-Ubaid-Transitional painted Fine Ware pottery, however poorly understood this ceramic horizon may still be (Cruells et al. 2013; Davidson 1977; Gómez-Bach 2009, 2011; Gómez-Bach et al. 2012; Nieuwenhuyse 2000; Tobler 1950). In Upper Mesopotamia this ceramic phase is characterized by a strong continuity from the preceding Late Halaf phase, but it displays subtle changes in the proportions of specific shapes and decorative designs. However, a closer inspection yields intriguing variabili-

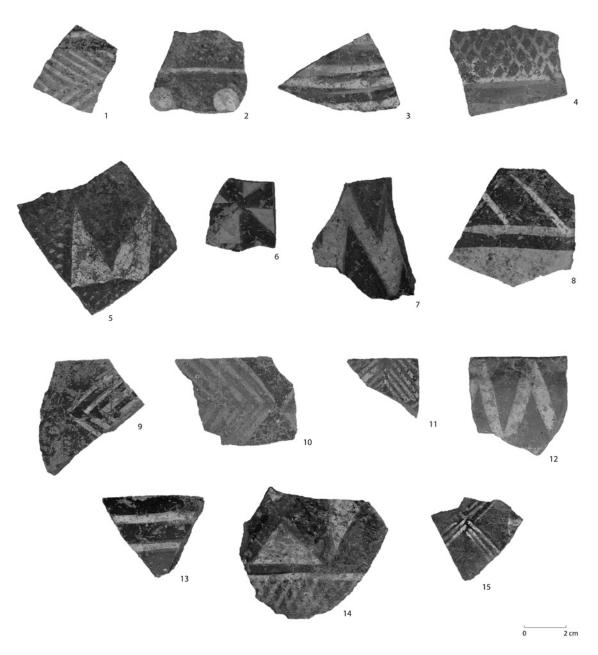


Figure 4. Tell Begum. Examples of polychrome-painted Halaf Fine Ware (after Nieuwenhuyse et al. in press).

ty that suggests the Halaf Fine Ware from Tell Begum is distinctive in at least two of its properties. First, the macroscopic fabric analysis done so far suggests variability in the clays prepared by the potters. Specifically, in many cases *plant* inclusions can be macroscopically observed which in all likelihood constituted a purposeful addition: in other words they were a real temper. Plant-tempered fabrics are *not* associated with Upper Mesopotamian Halaf Fine Ware.

Second, the high proportion of polychrome paints (ca. 30% in terms of basic sherd counts) is remarkable. At HUT sites further west of the Shahrizor, polychrome-painted designs do occur (Gómez-Bach 2017;

Gómez-Bach *et al.* 2012) but they are far less common. The Tell Begum specimens are indeed remarkable, showing shades of red, brown and reddish brown in addition to different shades of grey, black and white (Figs. 4 - 6). The white paint, interestingly, always seems to have been applied last, perhaps *after* firing.

In Iraqi Kurdistan, the prevalence of polychrome-painted decoration was certainly not unique to Tell Begum. Visually comparable ceramics have been documented at Tell Qortas and Tepe Marani in the Shahrizor (Mühl/ Nieuwenhuyse 2016; Wengrow *et al.* 2016), at Logardan near Chamchamal (Vallet, pers. com., July 2016) and at Qalat Said Ahmadan on the Rania Plain (Tsuneki

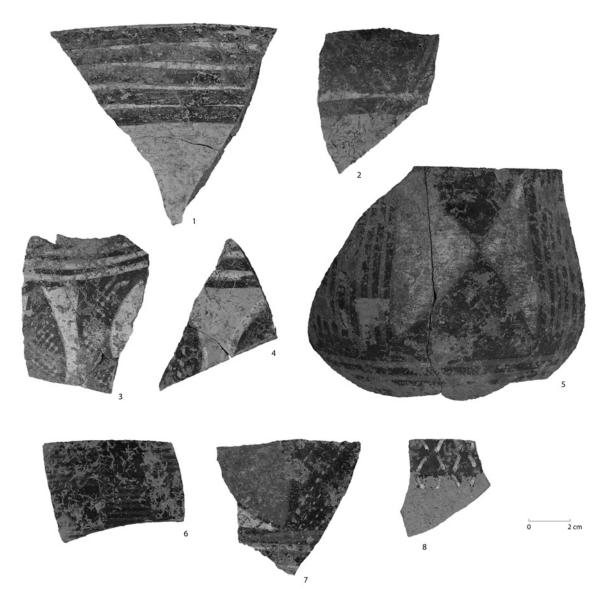


Figure 5. Tell Begum. Examples of polychrome-painted Halaf Fine Ware (after Nieuwenhuyse et al. in press).

et al. 2015, 2016). In other words, this is a regionally distinct stylistic expression. What is more, this prehistoric ceramic category appears to cross modern political borders, proving once more that such contemporary divisions are meaningless in Mesopotamian prehistory. It closely resembles the so-called J-Ware discovered in the 1960s in the Mahidasht Plain of the Iranian Central Zagros (Henrickson 1985; Levine/McDonald 1977; McDonald 1979). Further collaborative work should establish if the J-Ware and the Shahrizor HUT also are similar from a ceramic-technological point of view.

The recent work in the Iraqi Kurdistan region offers new perspectives on the role of polychrome-painted decoration in the later Halaf period. Polychromepainted ceramics were not regionally limited to the Zagros, but the frequencies with which they are found in later Halaf ceramic assemblages gradually decrease and eventually peter out moving west (Campbell 1995). They do occur in the Khabur Headwaters of Northern Syria, but are less common (Gómez-Bach 2009, 2011; Nieuwenhuyse 2000). At Tell Halula on the Syrian Euphrates, they are rather uncommon (Gómez-Bach 2009, 2011, 2017). In the Balikh Valley of Northern Syria they are altogether absent. Might the application of polychrome painted decoration in the later Halaf period have its origins in the Zagros, where it appears to have been the most abundant?

CONCLUDING REMARKS

To sum up, there is little doubt that the Shahrizor participated in the dynamic world of the Halaf cultural tradi-

Figure 6. Tell Begum. Typical vessel shapes and decoration of the Halaf-Ubaid Transitional ceramics. Nos 1-26: Halaf Fine Ware. No. 27: Halaf Coarse Ware (after Nieuwenhuyse et al. 2016).

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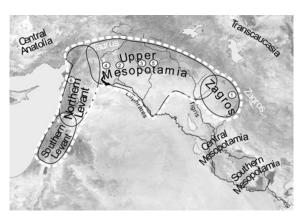


Figure 7. The Halaf world and its sub-regions, showing the locations of sites mentioned in the text. 1. Tell Begum in the Shahrizor. 2. Tell Sabi Abyad. 3. Tell Halaf. 4. Tell Halula. 5. Tell Chagar Bazar. 6. Tell el-Kerkh (after Nieuwenhuyse 2017).

tion. However, recent work suggests at least two possible ways in which the Halaf pottery from the Shahrizor is distinct from mainstream Halaf traditions as known from Upper Mesopotamia. First, the lead-up to the Halaf period may have differed locally. So far, no 'typical Early Halaf' pottery traits have been identified whatsoever in the Shahrizor. Local groups may instead have continued to use earlier Pre-Halaf styles longer than their contemporaries in northern Syria, or they may have developed styles that we cannot yet identify, or their socio-economic organization may have resulted in small, inconspicuous sites buried to modern surveyors. Second, during the final stages of the Halaf, the extraordinary polychrome-painted ceramics seem to represent a local variety of the Halaf-Ubaid Transitional stage. While certainly reminiscent of recent findings at Late Halaf to HUT sites in northern Syria, the abundance of polychrome compositions and the preference for using plant-tempered fabrics for making the vessels so far does not neatly match wider HUT ceramic assemblages in Upper Mesopotamia.

A more subtle aspect of regional distinctiveness may pertain to the organization of ceramic distribution: How did Halaf traits spread? For Upper Mesopotamia, it has become generally accepted that in addition to several other factors, ceramic exchange certainly played a role in distributing the containers and the stylistic innovations they represented (Davidson 1977; Davidson/ McKerrel 1976, 1980; Le Mière/Picon 2008; Spataro/ Fletcher 2010). In contrast, recent work by Helen Himmelman at the UCL Institute of Archaeology on decorated Halaf Fine Ware from the site of Tepe Marani suggests that the vessels were in all likelihood produced locally, although this remains to be confirmed by further study (Wengrow, pers. comm., August 2016). This would suggest that ceramic exchange played a minor role in spreading innovative ideas on pottery production

into this part of the Zagros Mountains. Alternative models might present travelling potters which made 'foreign' pots in local villages as suggested by Peder Mortensen for the Rania Plain (Mortensen 1970), or a decided preference by local communities for regionally extensive marital exchange programs, importing novel ideas as part of the marital package (Forest 2013).

Near Eastern prehistorians are, of course, quite familiar with regionally localized expressions of broader cultural traditions. Few would a priori expect bounded, homogeneous 'ceramic provinces' with synchronized ceramic changes in the Halaf period (Campbell 1992, 2007; Bernbeck/Nieuwenhuyse 2013; Nieuwenhuyse 2017). It is possible to conceive of the Halaf cultural tradition as a phenomenon extending to many more regions beyond the semi-arid Upper Mesopotamian plains with which it is traditionally associated (Fig. 7). Several micro-regions appear to have locally developed distinct expressions of the Halaf idiom; the Shahrizor and the Zagros more broadly may represent just another case in point (Nieuwenhuyse 2017). The point here is not to insist on typological hair splitting - are the northern Levantine DFBW cream bowls from Tell el-Kerkh genuinely Halaf or not? - but rather to argue that local, regional groups would have had distinct reasons for adopting or rejecting specific ceramic traits that modern archaeologists associate with the Halaf culture.

As has often been observed, archaeologists should not blindly stare at the material culture itself – the pots – but instead focus on the immaterial social practices they represent or made possible. In the case of the Halaf painted Fine Ware, we should think of shared notions of mutual hospitality, sharing and ritualized gift-giving through feasting (Karsgaard 2010; Nieuwenhuyse 2007, 2009, 2013, 2017, in press; Özbal/Gerritsen 2013). As Mottram argues (2016), such practices would be vital in the establishment of the supra-local social networks that provided a safety net in times of hardship and offered opportunities for the delayed return of people, goods and services. Regional groups may have come up with different material expressions while sharing these intangible notions to some extent.

Apparently, Late Neolithic communities in the Zagros thought it important to be part of the Halaf phenomenon, but to do so on their own terms. Adopting the occasional plant temper and indulging themselves in elaborately embellished polychrome-painted pottery containers may have been elements of a distinctive 'Western Zagros' approach to making Halaf painted pottery.

BIBLIOGRAPHY

AKKERMANS, P. M. M. G. 1989, The prehistoric pottery of Tell Sabi Abyad, in Akkermans, P. M. M. G. (ed.), *Excavations at Tell Sabi Abyad*, Oxford, Archaeopress (BAR International Series 468), 77-214.

AKKERMANS, P. M. M. G. 1993, Villages in the Steppe, Michigan, Ann Arbor.

AKKERMANS, P. M. M. G. 2014, Tell Sabi Abyad: the site and its chronology, in Akkermans, P. M. M. G., Brüning, M., Huigens, H. and Nieuwenhuyse, O. P. (eds.), Excavations at Late Neolithic Tell Sabi Abyad, Syria. The 1994-1999 Field Seasons. Turnhout, Brepols (PALMA Series 11), 17-28.

AKKERMANS P. M.M.G., LE MIÈRE, M. 1992, The 1988 Excavations at Tell Sabi Abyad, a Later Neolithic Village in Northern Syria, *American Journal of Archaeology* 96, 1-22.

AKKERMANS, P. M. M. G., VERHOEVEN, M. 1995, An Image of Complexity - The Burnt Village at Late Neolithic Sabi Abyad, Syria, *American Journal of Archaeology* 99, 5-32.

AKKERMANS, P. M. M. G., SCHWARTZ, G. M. 2003, *The Archaeology of Syria*, Cambridge, Cambridge University Press.

ALTAWEEL, M., MARSH, A., MÜHL, S., NIEUWEN-HUYSE, O. P., RADNER, K., RASHEED, K., SABER, A. S. 2012, New investigations in the environment, history, and archaeology of the Iraqi Hilly Flanks: Shahrizor Survey Project 2009–2011, *Iraq* 74, 1-35.

BECKER, J. 2015, Tell Tawila, Tell Halaf and Wadi Hamar: Halaf- und 'Obed-Zeit in Nordost-Syrien. Regionale Entwicklungen, Gemeinschaftkeiten und Unterschiede, Berlin, ex oriente.

BERNBECK, R., NIEUWENHUYSE, O.P. 2013, Established paradigms, current disputes and emerging themes: the state of research on the Late Neolithic in Upper Mesopotamia, in Nieuwenhuyse, O. P., Bernbeck, R., Akkermans, P. M. M. G. and Rogasch, J. (eds.), Interpreting the Late Neolithic of Upper Mesopotamia, Turnhout, Brepols (PALMA Series 9), 17-37.

BONACOSSI, D. M., IAMONI, M. 2015, Landscape and settlement in the Eastern Upper Iraqi Tigris and Navkur Plains: the Land of Nineveh Archaeological Project, seasons 2012-2013, *Iraq* 77/1, 9-39.

CAMPBELL, S. 1992, *Culture, Chronology and Change in the Later Neolithic of North Mesopotamia,* Edinburgh, Unpublished Ph.D. Thesis University of Edinburgh.

CAMPBELL, S. 1995, The Halaf Pottery, in Baird, D., Campbell, S. and Watkins, T. (eds.), *Excavations at Khar-*

abeh Shattani, vol.II, Edinburgh, University of Edinburg (Occasional Paper no. 18), 55-90.

CAMPBELL, S. 2007, Rethinking Halaf Chronologies, *Paléorient* 33/1: 103-136.

CAMPBELL, S., FLETCHER, A. 2010, Questioning the Halaf-Ubaid Transition, in Carter, R. A. and Phillip, G. (eds.), Beyond the Ubaid. Transformation and Integration in the Late Prehistoric Societies of the Middle East, Chicago, Oriental Institute (OIP 63), 69-83.

CRUELLS, W. 2004, The pottery, in Tunca, Ö., Molist, M. and Cruells, W. (eds.), *Tell Amarna (Syrie) I. La période de Halaf*, Leuven, Peeters (Publications de la Mission archéologique de l'Université de Liège en Syrie), 41-200.

CRUELLS, W. 2006, Chagar Bazar pré-historique: esquisse de la séquence d'évolution et la périodisation, in Tunca, Ö. Baghdo, A. M. and Cruells, W. (eds.), Chagar Bazar (Syrie) I: Les sondages préhistoriques (1999-2001), Leuven, Peeters, 121-142.

CRUELLS, W. 2009, Nouvelles données sur les origines et le développement de la céramique Halaf en Syrie, in Astruc, L., Gaulon, A. and Salanova, L. (eds.), *Methods for the Study of the First Pottery Productions: Case Studies from the Balkans and the Levant*, Rahden, Marie Leidorf, 93-103.

CRUELLS, W. 2017, Transitions and their Chronologies in the Pottery Neolithic of the Near East, in Cruells, W., Mateiciucová, I. and Nieuwenhuyse, O.P. (eds.) *Painting Pots - Painting People. Late Neolithic Ceramics in Ancient Mesopotamia*, Oxford, Oxbow, 11-29.

CRUELLS, W., MOLIST, M., TUNCA, Ö. 2004, Tell Amarna in the general framework of the Halaf period, in Tunca, Ö., Molist, M. and Cruells, W. (eds.), *Tell Amarna (Syrie) I. La période de Halaf*, Leuven, Peeters (Publications de la Mission archéologique de l'Université de Liège en Syrie), 261-283.

CRUELLS, W., NIEUWENHUYSE, O. P. 2005, The Proto-Halaf period in Syria. New sites, new data, *Palé-orient* 30/1, 47-68.

CRUELLS, W., GÓMEZ, A., BOUSO, M., GUERRERO, E., TORNERO, C., BUXÓ, R., SAÑA, M., MOLIST, M., BAGHDO, A., TUNCA, Ö. 2013, Chagar Bazar in Northeastern Syria: recent work, in Nieuwenhuyse, O. P., Bernbeck, R., Akkermans, P. M. M. G. and Rogasch, J. (eds.), *Interpreting the Late Neolithic of Upper Mesopotamia*, Turnhout, Brepols (PALMA Series 9), 367-478.

DAVIDSON, T. E. 1977, Regional Variation within the Halaf Culture, Edinburgh, Unpublished Ph.D. Thesis University of Edinburgh.

DAVIDSON T.E., MCKERREL H. 1976, Pottery Analysis

and Halaf Period Trade in the Khabur Headwaters Region, *Iraq* 38, 45-56.

DAVIDSON T.E., MCKERREL H. 1980, The neutron activation analysis of Halaf and 'Ubaid pottery from Tell Arpachiyah and Tepe Gawra, *Iraq* 42, 45-56.

DIRECTORATE GENERAL OF ANTIQUITIES BAGH-DAD. 1970, *Archaeological Sites in Iraq*, Baghdad.

DIRECTORATE GENERAL OF ANTIQUITIES BAGH-DAD. 1976, Atlas of Archaeological Sites in Iraq, Baghdad.

FOREST, J. D. 2013, The birth of a new culture: at the origins of the Halaf, in Nieuwenhuyse, O. P., Bernbeck, R., Akkermans, P. M. M. G. and and Rogash, J. (eds.) *Interpreting the Late Neolithic of Upper Mesopotamia*, Turnhout, Brepols (PALMA Series 9), 101-106.

GAVAGNIN, K., IAMONI, M. and PALERMO, R. 2016, The Land of Niniveh Archaeological Project: the ceramic repertoire from the Early Pottery Neolithic to the Sasanian period, *Bulletin American Society for Oriental Research*, 119-170.

GÓMEZ-BACH, A. 2009, Las producciones cerámicas del Halaf Final en Siria: Tell Halula (Valle del Éufrates) y Tell Chagar Bazar (Valle del Khabur), in Córdoba, J. M., Molist, M., Perez, C., Rubio, I. and Martínez, S. (eds), Proceedings of 5th International Congress on the Archaeology of the Ancient Near East, Madrid, April 2006, UAM II, Madrid, Universidad Autónoma de Madrid, 113-122.

GÓMEZ-BACH, A. 2011, Caracterización Del producto cerámico en las comunidades neolíticas de mediados del VI milenio cal BC: el valle del Éufrates y el valle del Khabur en el Halaf Final, Barcelona, Unpublished Ph.D. Thesis Universitat Autònoma de Barcelona.

GÓMEZ-BACH, A. 2017, Investigating Painted, Incised and Impressed Ware from the Late Halaf Period, in Cruells, W., Mateiciucová, I. and Nieuwenhuyse, O.P. (eds.) Painting Pots - Painting People. Late Neolithic Ceramics in Ancient Mesopotamia, Oxford, Oxbow, 38-51.

GÓMEZ-BACH, A., CALVO DEL CASTILLO, H., CRU-ELLS, W., STRIVAY, D., MOLIST, M. 2012, Black, red and white: characterizing Neolithic ceramic productions in middle Euphrates Valley, in Matthews, R. and Curtis, J. (eds.), *Proceedings of the 7th International Congress* on the Archaeology of the Ancient Near East. Vol. III. Wiesbaden, Harrasowitz, 527-536.

HIJARA, I. 1997, *The Halaf Period in Northern Mesopotamia*. London, NABU Publications (Edubba 6).

HENRICKSON, E. F. 1985, An updated chronology of the Early and Middle Chalcolithic of the Central Zagros Highlands, Western Iran, *Iran* 23, 63-108.

HOURS F., AURENCHE O., CAUVIN J., CAUVIN M.-C., COPELAND L., SANLA-VILLE P. 1994, *Atlas des Sites du Proche-Orient (14 000-5700 BP)*, Lyon, (Travaux de la Maison de l'Orient méditerranéen 24).

IAMONI, M. 2016a, Across millennia of occupation: the Land of Niniveh Archaeological Project in Iraqi Kurdistan: the prehistory and protohistory of the Upper Tigris rediscovered, in Kopanias, K. and MacGinnis, J. (eds.), Archaeological Research in the Kurdistan Region of Iraq and the adjacent areas, Oxford, Archaeopress (BAR International Series), 125-134.

IAMONI, M. 2016b, Larger site, better life? Site dimensions and the path to socio-economic complexity in Upper Mesopotamia across the Halaf and Ubaid periods, in lamoni, M. (ed.), *Trajectories of complexity in Upper Meso-potamia: processes and dynamics of social complexity and their origin in the Halaf period,* Wiesbaden, Harrasowitz, 57-84.

KARSGAARD, P. 2010, The Halaf-Ubaid Transition: a transformation without a center?, in Carter, R. A. and Phillip, G. (eds.), Beyond the Ubaid. Transformation and Integration in the Late Prehistoric Societies of the Middle East, Chicago, Oriental Institute (OIP 63), 51-68.

KOLINSKI, R. 2016, Insights into the settlement history of Iraqi Kurdistan from the Upper Greater Zab Archaeological Reconnaissance Project, in Kopanias, K. and MacGinnis, J. (eds.), *Archaeo-logical Research in the Kurdistan Region of Iraq and the adjacent areas*, Oxford, Archaeopress (BAR International Series), 163-172.

KOZBE, G. 2013, The Late Neolithic in the Şirnak area (Southeast Turkey, in Nieuwenhuyse, O. P., Bernbeck, R, Akkermans, P. M. M. G. and Rogasch, J. (eds.), *Interpreting the Late Neolithic of Upper Mesopotamia*, Turnhout, Brepols (PALMA Series 9), 479-492.

LE MIÈRE, M., NIEUWENHUYSE, O.P. 1996, The prehistoric pottery from Tell Sabi Abyad, in Akkermans, P. M. M. G. (ed.), *Tell Sabi Abyad, a Neolithic Village in the Balikh Valley (1988 to 1992),* Leiden, Nederlands Instituut voor het Nabije Oosten, 119-284.

LE MIÈRE, M., PICON, M. 2008, A Contribution to the Discussion on the Origins of the Halaf Culture from Chemical Analyses of Pottery, in Córdoba, J., Molist, M., Pérez, C., Rubio, I. and Martínez, S. (eds.), Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East, Universidad Autónoma de Madrid, April 3-8 2006, Madrid, Universidad Autònoma de Madrid, 729-734.

LEVINE, L. D., MCDONALD, M. M. A. 1977, The Neolithic and Chalcolithic periods in the Mahidasht, *Iran* 51, 39-50.

MALLOWAN M.E.L., CRUIKSHANK-ROSE J. 1935, Excavations at Tall Arpachiyah, 1933, *Iraq* II, 1-178.

MCDONALD, M. M. A. 1979, An Examination of Mid-Holocene Settlement Patterns in the Central Zagros Region of Western Iran, Toronto, Unpublished PhD Thesis University of Toronto.

MORTENSEN P. 1970, Tell Shimshara. The Hassuna period, Copenhagen, Munksgaard.

MOTTRAM, M. 2016, When the going gets tough: risk minimization responses to the 8.2 event in the Near East and their role in the emergence of the Halaf cultural phenomenon, in Biehl, P. F. and Nieuwenhuyse, O. P. (eds.), Climate and Cultural Change in Prehistoric Europe and the Near East, Buffalo, SUNY Press (Distinguished Monograph Series of the Institute for European and Mediterranean Archaeology 2), 37-66.

MÜHL, S. 2013, Siedlungsgeschichte im mittleren Osttigrisgebiet vom Neolithikum bis in die neuassyrische Zeit, Wiesbaden, Harrasso-witz (Abhandlungen der Deutschen Orient-Gesellschaft 28).

MÜHL, S., FASSBINDER, J. 2016, Magnetic investigations in the Shahrizor Plain: revealing the unseen in survey prospections, in Kopanias, K. and MacGinnis, J. (eds.), *Archaeological Research in the Kurdistan Region of Iraq and the adjacent areas*, Oxford, Archaeopress (BAR International Series), 241-248.

MÜHL, S., NIEUWENHUYSE, O. P. 2016. Halaf and Ubaid period settlement: A view from the Central Zagros Piedmont, in lamoni, M. (ed.), *Trajectories of complexity in Upper Mesopotamia: processes and dynamics of social complexity and their origin in the Halaf period*, Wiesbaden, Harrasowitz, 27-56.

NIEUWENHUYSE, O. P. 2000, Halaf Settlement in the Khabur Headwaters, in Lyonnet, B. (ed.), *Prospection Archéologique Haut Khabur Occidental (Syrie du N.E.).* Vol. I,Beirut, IFAPO, 151-260.

NIEUWENHUYSE, O. P. 2007, Plain and Painted Pottery. The Rise of Neolithic Ceramic Styles on the Syrian and Northern Mesopotamian Plains, Turnhout, Brepols (PALMA Series 3).

NIEUWENHUYSE, O. P. 2009, The Painted Pottery Revolution: Emulation, Ceramic Innovation and the Early Halaf in Northern Syria, in Astruc, L., Gaulon, A. and Salanova, L. (eds.), *Méthodes d'approche des premières productions céramiques. Etude de cas dans les Balkans et au Levant*, Rahden, Marie Leidorf, 81-91.

NIEUWENHUYSE, O. P. 2013, The social uses of decorated ceramics in Late Neolithic Upper Mesopotamia., in Nieuwenhuyse, O. P., Bernbeck, R., Akkermans, P. M. M. G. and Rogasch, J. (eds.), *Interpreting the Late Neolithic of Upper Mesopotamia*, Turnhout, Brepols

(PALMA Series 9), 135-146.

NIEUWENHUYSE, O. P. 2017, Globalizing the Halaf, in Hodos, T. (ed.), *The Routledge Handbook of Archaeology and Globalization*, London, Routledge, 839-854.

NIEUWENHUYSE, O.P. In press. Relentlessly Plain. Seventh Millennium Ceramics from Tell Sabi Abyad, Oxford, Oxbow.

NIEUWENHUYSE, O. P., BERGHUIJS, K., MÜHL, S. 2012, A Late Neolithic "fishing net" from Kurdistan, Northern Iraq?, *Paléorient* 38, 141-7.

NIEUWENHUYSE, O. P., ODAKA, T., KANEDA, A., MÜHL, S., RASHEED, K., ALTAWEEL, M. R. 2016, Revisiting Tell Begum. A prehistoric site in the Shahizor Valley, Iraqi Kurdistan, *Iraq* 78, 103-135.

NIEUWENHUYSE, O. P., WILKINSON, T. J. 2007, Late Neolithic settlement in the area of Tell Beydar, (NE Syria), in Lebeau, M. and Suleiman, A. (eds.), *Beydar Studies I*, Turnhout, Brepols (SUBARTU XXI), 268-303.

NIEUWENHUYSE, O.P., ODAKA, T. MÜHL, S. 2016, Halaf settlement in the Iraqi Kurdistan: the Shahrizor Survey Project, in Kopanias, K. and MacGinnis, J. (eds.), Archaeological Research in the Kurdistan Region of Iraq and the adjacent areas, Oxford, Archaeopress (BAR International Series), 257-266.

ODAKA, T., NIEUWENHUYSE, O.P., RASHEED, K., OZAKI, H., OMORI, T YONEDA, M. n.d. Halaf pottery in the East End: new radiocarbon dates from Tell Begum, Iraqi Kurdistan.

ÖZBAL, R. GERRITSEN, F. 2013, Burnishing, painting and fenestrating: social uses of pottery at Tell Kurdu, in Nieuwenhuyse, O., P., Bernbeck, R., Akkermans, P. M. M. G. and Rogash, J. (eds.) *Interpreting the Late Neolithic of Upper Mesopotamia*, Turnhout, Brepols (PALMA Series 9), 107-116.

RYE, O. S. 1981,. *Pottery technology: principles and reconstruction* 4, Washington, Taxacum.

SABER, A. S., SALMAN, S., RASHEED, K. MÜHL, S. 2014, Two salvage excavations in Southern Kurdistan, Sulaymaniyah Province, Iraq – Tell Tanjero (season 2008) and Tell Greza (season 2003), *Mitteilungen der Deutschen Orient-Gesellschaft* 146, 139-168.

SPATARO, M., FLETCHER, A. 2010, Centralisation or regional identity in the Halaf period? Examining interactions within fine painted ware production, *Paléorient*, 36/2, 91-116.

TOBLER, A. J. 1950. Excavations at Tepe Gawra, Philadelphia, University of Pennsylvania Press.

TSUNEKI, A., RASHEED, K., SABER, S. A., NISHI-YAMA, S., ANMA, R., ISMAIL, B. B., HASEGAWA, A., TATSUMI, Y., MIYAUCHI, YAMMO, S. J., MAKI-

NO, M., KUDO, Y. 2015, Excavations at Qalat Said Ahmadan, Slemani, Iraqi-Kurdistan: first interim report (2014 Season), *Al-Rafidan* XXXVI, 1-63.

TSUNEKI, A., RASHEED, K., SABER, S. A., NISHI-YAMA, S., WATANABE, N., GREEN-FIELD, T., ISMAIL, B. B., TATSUMI, Y., MINAMI, M. 2016, Excavations at Qalat Said Ahmadan, Qaladizah, Iraqi-Kurdistan: second interim report (2015 Season), *Al-Rafidan XXXVII*, 89-142.

UR, J. 2010, *Urbanism and Cultural Landscapes in Northeastern Syria. The Tell Hamoukar Survey 1999-2001*, Chicago, Oriental Institute (Oriental Institute Publications 137).

Ur, J., JONG, L. DE, GIRAUD, J., OSBORNE, J. F.,

MACGINNIS, J. 2013. Ancient Cities and Landscapes in the Kurdistan Region of Iraq. The Erbil Plain Archaeological Survey 2012 Season, *Iraq* 75, 89–118.

VŠIANSKÝ, D., MATEICIUCOVÁ, I. 2017. Analyzing Painted Pottery from Late Neolithic Tell Arbid Abyad, in Cruells, W., Mateiciucová, I. and Nieuwenhuyse, O.P. (eds.) Painting Pots - Painting People. Late Neolithic Ceramics in Ancient Mesopotamia, Oxford, Oxbow, 83-92.

WENGROW, D., CARTER, R., BRERETON, G., SHEPPERSON, M., HAMARASHI, S. J., SABER, S. A., BEVAN, A., FULLER, D., HIMMELMAN, H., SOSNOWSKA, H. 2016, Gurga Chiya and Tepe Marani: new excavations in the Shahrizor Plain, Iraqi Kurdistan, *Iraq* 78, 253-284.