THE SOUTHERN TIP OF THE NORTHERN LEVANT? THE EARLY POTTERY NEOLITHIC ASSEMBLAGE OF TEL RO’IM WEST, ISRAEL

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Abstract: The Southern Levant has a well-established sequence for the Pottery Neolithic period, consisting of three successive cultural entities: The Yarmukian, Lodian and Wadi Rabah cultures. However, in the Hula Valley, located in the northeastern part of the region, the Yarmukian culture is absent. Analysis of the pottery assemblage of the site of Tel Ro’im West, located at the northwestern edge of the valley, suggests that a different cultural entity may have resided here during the early phases of the period. The paper describes this pottery assemblage, considering its typological and temporal aspects. The implications of this assemblage for our understanding of the Early Pottery Neolithic period are explored. It is argued that it lacks distinctive traits of any of the well-defined Pottery Neolithic cultures of the Southern Levant, while other features suggest lines of similarity with north Levantine traditions.

INTRODUCTION

Starting as early as the 1930s, the history of research of the Pottery Neolithic period of the Southern Levant is full of twists and turns. Definition of cultural entities, their periodic assignment, their geographic distribution and their chrono-stratigraphic relationships were the subject of continuous debate and to a certain extent accompany us until today. Presently, it is widely accepted that the earlier part of the period consists of the Yarmukian and Lodian (Jericho IX) cultures, and the later part of the period is associated with the Wadi Rabah culture, designated by some scholars as the Early Chalcolithic period (see discussions in Gopher 1995; Gopher and Eyal 2012; Gopher and Gophna 1993; Garfinkel 1992; 1993 and 1999; Getzov 2009).

All three cultural entities have been found throughout the Mediterranean climatic zone of the Southern Levant, thus convincingly demonstrating an overlap of geographic distribution and strongly suggesting that the Yarmukian culture preceded the Lodian. The Hula Valley, however, is somewhat of an exception to this rule (fig. 1). While assemblages attributed...
to the Lodian and Wadi Rabah cultures have been recorded in sites like Tel Dan (Gopher and Greenberg 1996), Hagoshrim (Getzov 1999), Tel Te’o (Eisenberg et al. 2001) and Beisamoun (Rosenberg et al. 2006), the earliest Pottery Neolithic culture—the Yarmukian—is mostly absent, only briefly mentioned with reference to surface finds in Eynan (Perrot 1993: 389) and the lithic assemblage in Beisamoun (Khalaily et al. 2009). Elsewhere, these material assemblages were cautiously labeled ‘Early Pottery Neolithic’ (or Early PN), due to the absence of clearly observable Yarmukian features in pottery or art (Rosenberg 2010b).

A variety of hypotheses pertaining to the specific cultural sequence in this region may be considered. One, for example, may postulate that the emergence of the Pottery Neolithic in the Hula Valley was somewhat later than in other parts of the country. Conversely, it is possible to suggest that the Lodian culture occupied the Hula Valley at the same time as the Yarmukian spread through other areas.

The presence, however, of Early Pottery Neolithic assemblages that are not attributable to any of the major Pottery Neolithic cultural entities in sites like Kefar Gil’adi Stratum IV (Kaplan 1993), Beisamoun (Rosenberg 2010b) and Tel Ro’im West (henceforth TRW), suggests that the cultural sequence in this region may have differed from that observed elsewhere. Whether these sites represent a coherent cultural phenomenon or something more diffused in space and time is still difficult to determine. Furthermore, their relationship with the better-known Pottery Neolithic cultural entities is not entirely clear.

The present paper attempts to shed some light on these issues by presenting key aspects of the TRW pottery assemblage. This site is of particular interest as a case study, because it consists of a number of phases in a stratigraphic sequence and thus allows some observations on temporal development to be made as well. We will begin with a short description of the excavation results and then continue to present the pottery assemblage. Subsequently, a number of temporal patterns will be noted. The final section of the paper addresses the implications of these observations for the understanding of the Pottery Neolithic sequence in the Hula Valley.

THE SITE

Tel Ro’im West is estimated to have been about one hectare in size (fig. 2). It is located below the southeastern slopes of the Naphtali range descending to the Hula basin, ca 175 m above msl. This is a particularly rich ecotone, facilitating easy access to flora and fauna of both the mountain range and the valley. Furthermore, arable land is adjacent to the site on the east and south.

The site was excavated in one intensive salvage season in 2004 (Nadel and Nadler-Uziel 2011). Two excavation areas were dictated according to the development plan of a new road. Area A (125 m²) is the deepest and richest of the two, excavated to a maximum depth of 4 m. There were four superimposed Neolithic strata here, spanning the Pre-Pottery Neolithic B (PPNB) – Pottery Neolithic (PN) periods. The second area is an elongated arched trench, following the course of a planned road. It was divided into several sections (B-N, from north to south). Along most of its length there were no archaeologi- cal remains. However, the northern end of the trench was well within the site and Neolithic remains were found in sections B, C and D.

Each area was divided into a local grid of 1 x 1 m. Sieving focused on in situ features, and large samples of all sediments were also sieved. For the purposes of the present article a brief description of the stratigraphy of area A will suffice. A detailed analysis of the site’s stratigraphy will be provided elsewhere.

STRATIGRAPHY OF AREA A

Four main occupation strata were identified in area A, dated to the PPNB–PN periods. Each is 0.5–1 m thick, including a range of architectural features, installations and buri-
als, as well as a variety of finds. The strata differ in sediment color and composition, architecture and their flint and pottery assemblages. They are all superimposed, and in most parts of the area all four strata are present (fig. 3-4).

– Stratum I is the topsoil layer with occasional boulders, probably originating from the slopes above the site. It was very thin at the northwest, and up to 1 m thick in the lower southeastern part of the area. Only isolated Neolithic finds were found in it. Geo-archaeological observations identified two superimposed horizons with a gradual transition between them.

– Stratum II is comprised of brown sediment similar to that of Stratum I. While it has a clear low boundary with Stratum III below, its distinction from the topsoil layer above is harder to define and is based primarily on the presence of architectural features. Close geo-archaeological observations have shown that it consists of a dusty clay loam, probably ash, mixed with pristine brown clay; an abundance of stone, gravel and ceramic sherds was noted, embedded within a variegated matrix. Two segments of a long wall were found (W1021 and W2006); the wall is more than 1 m wide and encloses the northern part of the excavated area. By its northwestern end, two circular installations were found (L2008 and L2009). Stratum II is the uppermost occupational horizon, assigned to the Pottery Neolithic period.

– Stratum III is 0.5-1.0 m thick consisting of very hard, brown to reddish-brown clay, rich with gravel. A well-built curved wall (W1011) was exposed along the eastern section, demarcating a large open area. No archaeological finds were found beyond this wall, in areas E and F (fig. 2), possibly suggesting that it also marked the settlement’s eastern limit. The wall is built of two parallel lines of large fieldstones with an
An entrance through this wall was arranged through a well-built threshold, framed by two upright monoliths (fig. 5a-b). Several large pottery sherds were found by the threshold. Smaller walls and several floors are an integral component of this stratum. The stratum is assigned to the Pottery Neolithic period.

Stratum IV is marked by yellowish-grey sediment of a sandy compact texture. It includes a long wall, built in a sequence of slightly offset segments (W1052). This wall crosses the area from northeast to southwest, effectively dividing it into two. The space to the south of the wall is marked by a succession of lime floors, while the space to the north features a relatively dense construction of architectural remains, including walls 1032 and 1056 that form a sharp angle between them (fig. 3). This stratum was previously assigned to the Pre-Pottery Neolithic C period (Nadel and Nadler-Uziel 2011);
but, as will be discussed below, this may be an early Pottery Neolithic phase.

Stratum V differs from all overlying strata both in sediment and in material remains. The brown-red sediment is unlike any of those encountered in the higher levels and it contains only a small amount of gravel. The largest wall was found by the southeastern corner, built of large fieldstones. Several construction phases were noted, featuring fragmentary remains of walls and plastered floors. Below this stratum only sterile soil was found with no traces of earlier occupation. This stratum is assigned to the PPNB period, mostly according to the distinct flint assemblage and the lack of pottery (Nadel and Nadler-Uziel 2011).

THE POTTERY ASSEMBLAGE

The pottery assemblage of TRW consists of 1473 sherds (excluding fragments smaller than 1 cm across, lumps of clay and sherds for which both faces were not preserved). Of these, 9 do not constitute pottery receptacles (perforated discs, stoppers and a small stylized fragment, probably belonging to a figurine), and 18 sherds are clearly later intrusions. As a whole, the pottery assemblage was poorly preserved. Many sherds had large internal fissures; they were brittle and tended to crumble. This is likely to be a combined result of the ceramics’ porosity, the characteristics of the soil and post-depositional processes (Schiffer 1987). Coarse grained temper was extensively used, often in high densities. All the pottery was handmade. No evidence for the use of a rotational device was observed, nor were there any definite signs of mat impressions on the base that might imply a simple turntable. On several occasions junctures between coils or slabs were discerned; these, however, were not sufficient to allow a systematic distinction between the two techniques. The use of moulds is also a viable possibility (see Nativ et al. 2012a: 681-686; Yannai 1997).

The majority of the assemblage consists of plain body sherds that carry no diagnostic properties concerning either vessel shape or surface treatment (n=923; 62.6%). Body sherds that bear surface treatments consist of 292 specimens (19.8%), while morphologically diagnostic sherds comprise 218 specimens (14.8%). These include rims (n=124), bases (n=72), handles (n=31), carinated fragments (n=30) and shoulder joints of jars (n=16).

FABRIC

Although many lines of variation can be noted (paste, inclusions, firing, etc.), the divergent visual impressions produced by ‘vessels’ colors’ are most suggestive of differentiation. While the lines of transition are blurred, at least three color groups are readily defined for the pottery assemblage of TRW: red-brown, buff-cream and gray-black. The overwhelming majority of the assemblage consists of red to brown fabrics (n=1131; 81.8%) that are likely to have originated from the local heavy soils of the valley bottom or from Terra Rosa soil on the hill slopes to the west (Ravikovitch 1969). Surface treatment was observed on 20% of these sherds (fig. 6), usually consisting of burnished slip (n=109; 9.6%), although non-burnished slips (n=70; 6.1%) and plain burnish (n=54; 4.7%) were recorded as well. Other modes of surface treatment were altogether uncommon. Judging by the thickness of their walls (fig. 7), they consisted primarily of fairly robust vessels (e.g., fig. 8: 4, 11; fig. 9: 2-6).

A distinctively pale color was marked by buff through cream fabrics (n=118; 8.6% of the entire assemblage), produced by purposeful selection of calcareous pastes, firing the vessels in highly oxidizing conditions, or a combination of both. These vessels were comparatively coarse and heavy (fig. 9: 1; fig. 10: 1); their surfaces were rarely treated beyond elementary smoothing, although a preference for ‘roufethening’ (coarse coating added to the exterior the vessel’s walls) is observable (fig. 10: 19).
Fig. 8 – A selection of bowls. 1-5) open bowls with reddish-brown matrix; 6) hemispherical; 7) carinated; 8-13) straight-sided:
1. red slip (1015b/29, Area A, Str. II); 2. wadi sand inclusion, knob, burnished red slip (5905/1, Area D); 3. wadi sand and organic inclusions, burnished red slip (5905b/1, Area B); 4. wadi sand inclusions (1022x/25, Area A, Str. III); 5. red slip (2092a/1, Area A, Str. V); 6. reddish-gray matrix, wadi sand inclusions, plain burnish (2052b/1, Area A, Str. IV); 7. reddish-brown matrix, wadi sand inclusions, red slip (5905/3, Area D); 8. grey matrix, plain burnish (2069a/2, Area A); 9. black-orange matrix, calcareous inclusions, plain burnish (2070/1, Area A, trial trench); 10. reddish-brown matrix, wadi sand inclusions, red slip (1015a/5, Area A, Str. III); 11. reddish-brown matrix, red slip (1015a/5, Area A, Str. III); 12. reddish-brown matrix, calcareous inclusions, plain burnish (2051a/1, Area A, Str. II); 13. reddish-brown matrix, calcareous inclusions (2000a/1, Area A, Str. I).
In striking contrast to the pale vessels, the third fabric type is characterized by gray to black hues (n=133; 9.6%). This fabric is commonly associated with relatively fine vessels with thin and even walls (fig. 8, 6-9; fig. 10: 2). The vessels are often burnished, producing a lustrous finish, although other modes of surface treatments were noted as well.

**TYPOLOGICAL COMPOSITION**

Altogether, the assemblage is characterized by simple forms; vessels' walls are often thick (> 1 cm; n=648; 44.2%) and have an undulating surface. Only 126 specimens (8.6%) could be attributed to particular vessel type (table 1).
Fig. 10 – A selection of closed vessel, bases and treated body sherds. 1-2) holemouth jars: 1, buff-gray matrix, wadi sand inclusions (d/9, Area D); 2, reddish-gray matrix, plain burnish (2089b/1, Area A, Str. VI); 3-4) necked jars, reddish-brown matrix: 3, 5004a/7, Area D; 4, wadi sand inclusions, red slip (5005/2, Area D); 5) a knob handle (loop handle, reddish-brown matrix, wadi sand inclusions (d/10, Area D); 6-12) bases: 6, Concave base, calcareous inclusion (1022y/14, Area A, Str. III); 7-8, Ring base, gray matrix, plain burnish (1040b/1, 2067/1, Area A, Str. IV); 9, Ring base, reddish-brown matrix, wadi sand and calcite inclusions (2055a/1, Area A, Str. IV); 10, Ring base, gray matrix (3026c/1, Area B); 11, Ring base, reddish-gray matrix, plain burnish, incision (5005b/1, Area D); 12, Flat base, brown matrix, punctured (3097e/1, Area B); 13-14) incised body sherds: 13, gray matrix (1040b/2, Area A); 14, reddish-gray matrix, calcareous inclusions, plain burnish (3026c/1, Area B); 15-16) slipped body sherds: 15, reddish-brown matrix, calcareous inclusions, carinated, red slip (5004a/8, Area D); 16, reddish-gray matrix, wadi sand and organic inclusions, knob, red slip (5004a/10); 17-19) fragments bearing ‘roughening’: 17, reddish-brown matrix, wadi sand inclusions (5005/13, Area D); 18, reddish-brown matrix, calcareous inclusions (5005/16, Area D); 19, buff matrix, organic and calcareous inclusions (5005/17, Area D).
Bowls

These are by far the most common vessel type, constituting 63.5% of the typologically identified specimens (n=80). They are open vessels with simple, sometimes flaring rims. Most of them have straight walls, which are either oblique, producing an open profile (open bowls; n=35), or vertical (straight-sided bowls; n=23) (fig. 8). Occasionally, hemispherical (n=5) or carinated (n=2) profiles are noted as well. These bowls vary considerably in size and wall thickness. Generally speaking straight-sided bowls tend to be slightly larger and more robust than others (fig. 11-12), while the carinated, and to a slightly lesser extent also the hemispherical are comparatively delicate, characterized by thinner walls and narrower diameters.

Kraters, deep bowls and pithoi

These relatively large open vessels constitute a poorly differentiated group (fig. 9), distinguished from bowls by token of the thickness of their walls or their widening rim (n=16; 12.7%). Although oblique angles have been noted, most have vertical walls, sometimes with knob handles. These vessels are the largest and heaviest in the assemblage (fig. 11-12) and are presumed to have been deeper as well, although the possibility that at least some of them originated from shallow basins cannot be excluded.

Holemouth jars

Altogether thirteen holemouth jars were recorded, constituting 10.3% of the morphologically diagnostic sherds (fig. 10: 1-2). They are distinguished from the open vessels by token of their converging walls. The measurements of these vessels overlap closely with those of the straight-sided bowls (fig. 11), perhaps implying some degree of affiliation between the two types. Almost half of the rims associated with this type of vessel were flat (n=6), while the remainder had a rounded section.

Necked-jars

Necked-jars (fig. 10: 3-4) constitute 13.5% of the assemblage (n=17). Unlike other vessel types that are defined by the rims, most necked jars were identified via the joint of neck and body. Nevertheless, some significant morphological variations were noted and several sub-types could be observed. Thus, among those that could be further classified are a straight-necked jar, two jars with inverted necks (fig. 10: 3) and a single bow-rim jar. Only in one case was a loop-handle recorded (fig. 10: 4).

OTHER MORPHOLOGICAL FEATURES

Bases

Sixty-eight bases and base fragments were recorded (fig. 10: 6-12); most of these are flat bases (n=89, 57.3%). Other base types noted in the assemblage include ‘pebble’ or ‘honey-comb’ bases that bear numerous round impressions, which sometimes

Table 1 – Typological composition of the pottery assemblage of TRW.

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Open bowl</td>
<td>35</td>
<td>27.8</td>
</tr>
<tr>
<td>Straight-sided bowl</td>
<td>23</td>
<td>18.2</td>
</tr>
<tr>
<td>Hemispherical bowl</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Carinated bowl</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Undifferentiated bowl</td>
<td>15</td>
<td>11.9</td>
</tr>
<tr>
<td>Deep bowl / Krater</td>
<td>16</td>
<td>12.7</td>
</tr>
<tr>
<td>Holemouth jar</td>
<td>13</td>
<td>10.2</td>
</tr>
<tr>
<td>Necked jar</td>
<td>17</td>
<td>13.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>126</td>
<td>100</td>
</tr>
</tbody>
</table>
also cover the vessels’ lower walls (n=7, 10.3%), disc bases that are flat and emphasized, protruding beyond the line of the wall (n=6, 8.8%), ring bases (n=4, 5.8%) and one case of a concave base (1.6%). Additional eleven base fragments (16.2%) could not be attributed to any of the above mentioned categories with certainty. The diameter of the bases ranges between 4 and 20 cm with a clear tendency to cluster around values from 10 to 12 cm (fig. 13).

Handles
Twenty-eight handle fragments were recorded (fig. 9: 4-6; fig. 10: 4-5), comprising 2% of the total assemblage. Of these thirteen were loop handles with oval or circular sections (46.4%), nine were knob or ledge handles (32.1%) and one was a broad strap handle (3.6%). The remainder (n=5, 17.9%) could not be identified with certainty. The category of ledge or knob handles is fairly diverse. Some were quite broad (roughly 5 cm wide; n=2), some had a flat or concave upper face and a rounded bottom (n=3) and others were oval in form.

Carinated pieces
Carinations were observed on 29 items, 2% of the entire assemblage. Only in four cases could it be associated with a particular vessel type (one bowl, one hohlemouth jar and two necked jars), while all others were on unidentified body sherds.

SURFACE TREATMENTS
Altogether 351 pottery sherds bear one kind of surface treatment or another, constituting 24% of the assemblage. These are subdivided into five elemental types including slip, paint, burnish, incision and plastic additions.

Slip
It consists of the application of pigment over all or a large portion of the surface of the vessels. In all, 209 slipped sherds have been recorded constituting 59.5% of all treated sherds. Most are red or reddish-brown (n=191, 91.4%), while the remainder are black to gray (n=8, 3.8%) or white to cream (n=10, 4.8%). 174 of the slipped sherds are body sherds (83.6%), 25 are associated with rims (12%), two with bases (1%), five with shoulders (2.4%) and two with handles (1%). This distribution corresponds fairly well with the general distribution of vessel parts, suggesting that slip was equally applied to all vessel parts. Among those that could be readily associated with a given vessel type (n=32), 72% were on bowls (n=23), 15.6% on jars (n=5), 6.2% on hohlemouth jars (n=2) and 6.2% on kraters (n=2). Here too, the distribution of slip per vessel type corresponds quite well with the overall distribution vessel types, suggesting that no typological differentiation was involved.

Paint
It consists of the application of pigment to produce a design. Only two items bearing evidence for the application of paint (red or reddish-brown) were recorded. Both were applied to the rims of vessels, one a hohlemouth jar, the other a bowl.

Burnish
Burnish is a shine applied to the surface of a vessel by means of a hard implement (e.g., pebble). Burnish may occur on its own (plain burnish) or in conjunction with a slip (red/dark/black burnish). It is the most common form of surface treatment, recorded on 231 items that represent 65.8% of all treated sherds. Of these 194 were recorded on body sherds (84%), 26 were associated with rims (11.3%), four with a base (1.7%), four with a shoulder (1.7%) and three with a handle (1.3%). Of all the burnished items for which a morphological type could be assigned (n=30), 20 are bowls (66.7%), four are kraters (13.3%), two are hohlemouth jers (6.7%) and four are necked jars (13.3%). As a rule this seems to agree fairly well with the general distribution of vessel types.

Incision
Uncommon (fig. 10: 11-14), incision is recorded in twelve instances, constituting 3.4% of all treated sherds. Eight of these bear linear patterns (66.7%), three bear punctures (25%) and one a combination of both (8.3%). With one exception
that consists of a single line, all linear incisions are composed of several lines that are ordered in various angles, sometimes parallel, sometimes transecting. Punctures consist of small notches produced by a fine sharp instrument applied in small intervals. Ten of the twelve incisions were associated with body sherds (83.3%), while two were associated with the base (16.7%). Although the sample is too small to warrant statistical reliability, this may suggest that incisions were more commonly associated with the lower parts of vessels.

Plastic additions

Additions to the vessels’ walls were recorded for 35 sherds. Of these two consisted of small knobs (5.7%; fig. 9: 2 and fig. 10: 16), while the remainder are characterized by a coarse roughening (94.3%; fig. 10: 17-19), varying in thickness between 1 and 6 mm. Thirty-one of the ‘roughened’ sherds were body sherds while two were associated with bases, suggesting that this type of surface treatment was related to the lower part of vessels. There seems, therefore, to be an affinity between roughening and the abovementioned ‘pebble-base’ that is also characterized by a coarse surface located on the lower parts of the vessel.

TEMPORAL PATTERNS

Although most of the pottery of TRW was retrieved from a well-defined stratigraphic sequence, the foregoing account refrained from outlining distinct assemblages, preferring to treat it as a single phenomenon. While issues of assemblage size and preservation may be partially accountable, the prime reason for this preference was that other than density, no sharp differences could be observed between strata. Nevertheless, more subtle temporal patterns of development could be discerned in the form of changing frequencies of various attributes. These will be briefly presented here.

The majority of the pottery assemblage of TRW originated from Area A (n=909; 61.7%), which also offers the most detailed stratigraphy (see above). The distribution of pottery across these strata is presented in Table 2.

The eleven pottery sherds recovered from Stratum V are likely intrusive and are therefore considered here as belonging to Stratum IV. The present analysis is quantitative, oriented toward the identification of temporal trends across the stratigraphic sequence. Given the relatively small size of the assemblage, only aspects that are sufficiently abundant to support statistically reliable analyses will be considered.

However, before any particular trend is considered, it is necessary to establish that the processes responsible for the formation of the pottery assemblage as recorded were altogether consistent, and that the variations among stratigraphic units are indeed due to temporal processes. This suspicion, unfortunately, cannot be entirely rejected; however, the distribution of vessel parts may provide a proximate estimation. Generally speaking, it is reasonable to assume that, insofar as the assemblage did not undergo large scale transformations and that the formation processes were consistent, the distribution of vessel parts will be the same for all units. This expected distribution is provided by Figure 14 that shows only small and statistically insignificant variations between the assemblages.

Evidently, the quantitatively most reliable aspects of the pottery assemblage are those that could be recorded for the majority of sherds, regardless of size or typological designation. At least three such features are available: the average thickness of vessels’ walls, application of surface treatment, and fabric. The distributions of wall thickness and surface treatment are presented in Figures 15 and 16, respectively. In both, it is apparent that the assemblage associated with Stratum IV differs considerably from those of strata III and II, which are comparatively close. Chi-square test results indi-

Table 2 – Distribution of pottery across the five strata of area A.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>N</th>
<th>%</th>
<th>Comments</th>
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<tbody>
<tr>
<td>I</td>
<td>35</td>
<td>3.80%</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>239</td>
<td>26.30%</td>
<td>Includes one sherd of intermediary str. II/III context</td>
</tr>
<tr>
<td>III</td>
<td>468</td>
<td>51.50%</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>110</td>
<td>12.10%</td>
<td>Including eight sherds from indeterminate str. III/IV context</td>
</tr>
<tr>
<td>V</td>
<td>11</td>
<td>1.20%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>909</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
cate that the differences between strata IV and III are statistically significant (p<0.05), while those between strata III and II are not.

Concerning wall thickness, the vessels of Stratum IV are strongly inclined towards values ranging between 6.5 and 9 mm with the curve rising and declining sharply on both sides. The curves for strata III and II, on the other hand, are broader and more moderate (fig. 15). One may therefore suggest that the pottery assemblage of TRW had begun with fairly standardized and delicate vessels, which subsequently evolved into more robust and varied forms.

Also in the case of the application of surface treatments a consistent pattern of development was noted, demonstrating an ongoing decrease in the ratio of vessels bearing surface treatments (fig. 16): from 38% to 21% between strata IV and III, and down to 15% in Stratum II. As demonstrated by Figure 17, presenting the application of different types of surface treatment, this is mostly accounted for by a substantial drop in the application of plain burnish, from 27% of all sherds in Stratum IV to 5% in Stratum III.

This decrease in plain burnished sherds was accompanied by a more moderate, though consistent, decrease in burnished slips. Conversely, unburnished slips increased in frequency between strata IV and III, while others remained more or less unchanged throughout the entire sequence. As a whole therefore, it seems that the pottery associated with the earlier strata were often burnished and it is this mode of surface treatment which fell out of favor, while the application of slips and other modes of decoration remained more or less the same.

Another aspect of the trends depicted by Figure 17 pertains to the preference for particular types of surface treatment. Generally speaking the sequence is one of converging curves, which begin being distributed far apart and continuously come closer together. While this process is most pronounced between strata IV and III, the trend continues into Stratum II as well. In other words, while prior to Stratum III there were clear preferences for some types of surface treatments over others, after it there were none, all surface treatments were equally (un)favorable.

Alongside the parameters of wall thickness and surface treatment discussed above, the fabric of the pottery vessel was also recorded for a considerable number of specimens. These consist of three basic categories: red-brown, buff-cream and gray-black. Figure 18 presents their temporal distribution, which is altogether continuous and consistent. While the red-brown fabric is dominant throughout the sequence, it increased between strata IV and III and maintained its position in Stratum II; vessels made of buff-cream fabrics steadily increased in popularity, while those made of gray-black fabrics decreased.
Statistically, the difference between the assemblages is significant (p<0.01), but qualitatively they seem to be rather subtle. A two-tiered structure, unequivocally dominated by red-brown fabrics, is consistent throughout the sequence; and the observed line of development primarily pertained to the secondary group that (quantitatively) occupied the sidelines of the assemblage. This secondary group, however, may have been singled out intentionally, perhaps representing a distinct category of vessels, initially marked by dark colors and later by pale ones.

It was suggested in the past that preference for pale fabrics in Neolithic pottery is related to the desire to provide an appropriate background for painted decorations (Gopher and Goren 1995). However, there is little evidence for this in TRW, if anything the pale fabrics were less commonly decorated than the others (fig. 7).

Technologically, the color of the fabric is influenced by a number of parameters, most importantly the raw material used and firing conditions (Rice 1987, Rye 1981). It is likely that the buff-cream colors are due to the use of sediments with high calcareous content, while the gray to black fabrics resulted from firing the vessels under reducing conditions. Reduced firing conditions may occur spontaneously, due to fluctuations within an open fire or a kiln, thus producing black stains. However, the systematic production of blackened vessels (e.g., the Dark Faced Burnished Ware of the Wadi Rabah culture) implies a purposeful control of the fire and technical skill, perhaps even specific facilities (Goren 1991: 114-115). From this point of view, the decrease in evidence of reduced firing conditions suggests a relinquishment not only of an aesthetic quality (black color) but also of a technology, perhaps entailing, in the long-run, a loss of know-how. Similarly, the increase in buff-cream fabrics suggests a growing emphasis on the purposeful selection of highly calcareous raw materials.

Additional differences among the fabric groups may be noted with reference to the parameters discussed above. First, one may note that sherds associated with black or gray colors are relatively fine and delicate (most are 3.5-9 mm thick), whereas the vessels made of buff-cream or red-brown clay are comparatively robust (6.5-15 mm; fig. 6). Second, concerning surface treatments, a much higher portion of gray-black sherds were accompanied by surface treatments compared to those consisting of red-brown and buff-cream fabrics (fig. 7).

Altogether, it seems, the character and temporal distribution of gray-black fabrics is symptomatic of the previous trends discussed. Given their association with relatively fine vessels, their decrease in occurrence goes hand in hand with the general increase in vessels’ robustness; and the high ratio of surface treatments associated with them suggests that their diminishing numbers is related to the trend of decreasing surface treatments observed across the assemblage as a whole.

DISCUSSION

Altogether, the pottery assemblage of TRW is fairly simple, presenting a narrow range of forms, and little morphological elaboration. Many of the sherds are coarse and heavy; surface treatments usually consist of burnish, slip or a combination of both, while figurative or geometric designs are entirely absent. Simple bands and somewhat careless incisions represent the apex of decorative elaboration.

The range of forms, the uneven surfaces, the distributions of wall thickness and the variety of surface treatments are all well known characteristics of the Early PN (Garfinkel 1999). However, features that may facilitate a more specific attribution to either the Yarmukian or Lodian ceramic traditions are absent or at least should be regarded as insufficient. The carefully executed herringbone pattern, considered a hallmark of Yarmukian pottery, is entirely absent; painted designs are rare and simple; ridges at the joint of jar neck and body, common in Lodian assemblages, are absent; and the variety of handle types offers no distinctive pattern.

On the other hand, several features distinguish the pottery of TRW from other south Levantine Pottery Neolithic assemblages. Most striking in this respect are the three fabric types, each with its own unique visual impression. Although the application of mineralogical analyses to south Levantine Pottery Neolithic assemblages have demonstrated the coexistence of several technological patterns (Goren 1991 and 2004; Nativ et al. 2012a and b), their visual effect was often subtle, with fabric colors ranging between light brown, orange and buff.

Distinctive fabric groups are, however, a common feature in the Northern Levant, Syria and Upper Mesopotamia. In these areas, Early PN assemblages have been repeatedly reported to consist of several wares that differ in composition, typology and color, ranging from buff through orange to black (e.g., Akkermans et al. 2006; Tsuneki and Miyake 1996; Nishiaki and Le Mière 2005). In this respect, the distinctive burnished gray-black vessels, characterizing the earlier phases of TRW, are of particular interest. In the Southern Levant similar vessels are rarely noted before the later part of the Pottery Neolithic with the so-called Dark Faced Burnished Ware of the Wadi Rabah culture. In the Northern Levant gray to black...
The figures for the earliest pottery phase at TRW must be meter (Gopher and Eyal 2012: 556-560; Nativ et al. 2012: 77). Similarly, the earliest pottery bearing phase in TRW (Area A, Stratum IV) was originally attributed to the Pre-Pottery Neolithic C period, on account of the very low number of pottery sherds recovered (Nadel and Nadler-Uziel 2011) as was the case of the Early PN occurrence in Beisamoun where most of the pottery was found in a single pit (Rosenberg 2010a).

Unfortunately, we are currently unable to offer an accurate measure of sherd density for TRW. However, compared to other Early PN assemblages from the Southern Levant that produced densities between 100 and 300 sherds per cubic-meter (Gopher and Eyal 2012: 556-560; Nativ et al. 2012b: 119), the figures for the earliest pottery phase at TRW must be considerably lower.

It seems, therefore, that while the pottery assemblage of TRW cannot be assigned to either of the early Pottery Neolithic cultures of the Southern Levant, a number of features suggest its affiliation with more northern traditions. These include:

- The use of several distinctive fabrics (or wares);
- A progressive replacement of finely produced vessels with coarser ones;
- Very low densities of pottery sherds in the earliest phase.

Concomitant with the absence of clear lines of contact with pottery traditions of the Southern Levant, the ceramic repertoire of TRW may represent a more northerly-oriented ceramic tradition that is quite distinct in the south Levantine landscape. This is, of course, not to suggest a strict or straightforward resemblance between TRW and north Levantine Pottery Neolithic assemblages, but only to emphasize that there are important features in common.

While to date no definitive links with other sites in the vicinity can be made, it is possible that the small assemblage recently reported from Beisamoun (Rosenberg 2010a) and the assemblage of Kefar Gil’adi Stratum IV (Kaplan 1993) ought to be attributed to the same cultural horizon.

Unfortunately, little is known about the Pottery Neolithic in Lebanon and Southwest Syria, producing a considerable geographical gap between the aforementioned cultures of the Northern and Southern Levant. As a result, there is little ground upon which to consider the position of TRW in the regional cultural sequence. Nevertheless, some thoughts do come to mind.

As noted in the introduction to this paper, no occupation in the Hula valley can be securely attributed to the Yarmukian culture—the earliest pottery bearing cultural entity in the Southern Levant—while the late Ledian and Wadi Rabab cultural horizons were widely reported. This alone may be taken to imply a gap in the local cultural sequence, which TRW might help fill, a suggestion that is reinforced by the Yarmukian characteristics of the flint assemblage (Nadel and Nadler-Uziel 2011).

Several culture-historical implications follow from this. On a local scale our suggestion implies that the Hula Valley experienced exchanges of northern and southern influences during the Early PN as in later parts of the Pottery Neolithic (see also Rosenberg 2010b and in press). At least insofar as ceramic traditions are concerned, it seems that the earliest Pottery Neolithic cultures in this area were marked by northern influences and were later replaced or evolved into a more distinctive southern facies, associated with the Ledian culture. Moreover, in view of the probable contemporaneousness of TRW with the Yarmukian culture elsewhere, as the flint assemblage suggests (Nadel and Nadler-Uziel 2011), their spatial interrelationship can be charted. While the Yarmukian culture is known to have extended as far north as Byblos in Lebanon (Dunand 1973: 42-61, PIs. L-LII, CX-CXIII), its northernmost expanse seems to have been limited to the coastal plain, whereas further to the east, in the Hula Valley and most likely also the Lebanon Beqqa, resided a different culture associated with more northerly traditions. It seems, accordingly, that during the earliest phases of the Pottery Neolithic, the Galilee Mountains constituted a physical barrier between two distinct cultural spheres; a southern one with a northern extension along the coast (Yarmukian), and a northern one with a southern extension along the Rift Valley (fig. 19).

This line of interpretation also underscores the relationship between the Pottery Neolithic of the Northern and Southern Levant, concerning the emergence of pottery. Pottery emerged in the Northern Levant at the beginning of the 7th millennium cal. BC, several centuries before the southern Levantine Yarmukian culture crystallized (Le Mière et Picon 2005: 59-63; Le Mière et al. 1998: 11).

1. N. Blockman, The Lodian Culture (Jericho IX): Following the Excavation at Netiv Yurak. Unpublished MA Thesis. Tel Aviv University, 1997 (in Hebrew); see Graph 2.
Accordingly, it is widely accepted that the production and use of ceramic containers diffused from north to south; but see Biton et al. 2014. The spatial disjuncture between the early Pottery Neolithic of the Hula Valley as presented by TRW and the Yarmukian, suggests that the traditions in question evolved independently; while the idea of producing durable ceramic containers may have originated in the north, the south Levantine population applied it in a wholly independent manner. It seems there is little room to envision a gradual change in pottery traditions along the north-south axis; rather, a break is implied.

This may also suggest that the PPN – Pottery Neolithic transition of the Hula Valley differed from that observed elsewhere in the Southern Levant. This evidently applies to the qualities of the nascent pottery assemblages, but it may also apply to their timing. Insofar, as 1) the TRW pottery assemblage is associated with northern traditions, 2) pottery emerged earlier in the Northern Levant, and 3) the consumption and use of pottery in the earliest ceramic level of TRW was of a very modest scale, a pattern not readily observed in other south Levantine sites (see however, Rosenberg 2010a), it is possible that TRW Stratum IV pre-dated the Yarmukian and may have been contemporaneous with the PPNC.

Summarizing the above, the Early Neolithic pottery assemblage of TRW seems to represent a northerly-oriented tradition, of a kind that does not conform to south Levantine standards. In view of the locally established cultural sequence, it is likely to have been contemporaneous with the Yarmukian culture, and succeeded by the Lodian. These observations suggest considerable implications for our understanding of culture-historical patterns of the Levant, pertaining to the relationship between cultures of the northern and southern Levant, regarding the emergence of pottery production and perhaps also reflecting upon the PPN – Pottery Neolithic transition. These suggestions, of course, are preliminary and they ought to be viewed as potential lines for future investigation.

Fig. 19 – Geographical distribution of the Yarmukian, Lodian and northern Levantine ceramic traditions. Arrow marks the presumed direction of northern influence.
assemblage of TRW alone is insufficient to substantiate the hypotheses advanced here and much more work and data are needed to explore their validity and implications. Ultimately, the case of TRW seems to suggest new lines of evidence for the interplay of cultural and technological development in the Levantine Pottery Neolithic.

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