

# THE CREATIVE CENTURIES: DIVERSITY AND INNOVATION IN IRANIAN NEOLITHIC CERAMICS

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*Los primeros siglos del Neolítico cerámico se caracterizan por las diferencias regionales en arcillas y diseños cerámicos, que reflejan la creatividad en decoración y modelado. Durante el Neolítico tardío se opta por un repertorio limitado de diseños y productos que trascienden las fronteras regionales. Los estudios de caso del oeste de Irán ilustran estas tendencias.*

Irán, Neolítico Cerámico, Innovación, Diseño

*The early centuries of the ceramic Neolithic are noted for regional differences in ceramic wares and designs, which reflect creative innovation in decoration and modeling. During the later Neolithic there is growing convergence on a limited repertoire of designs and wares, which transcend regional boundaries. Case studies from Western Iran illustrate these trends.*

Iran, Neolithic ceramic, Innovation, Design.

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## INTRODUCTION

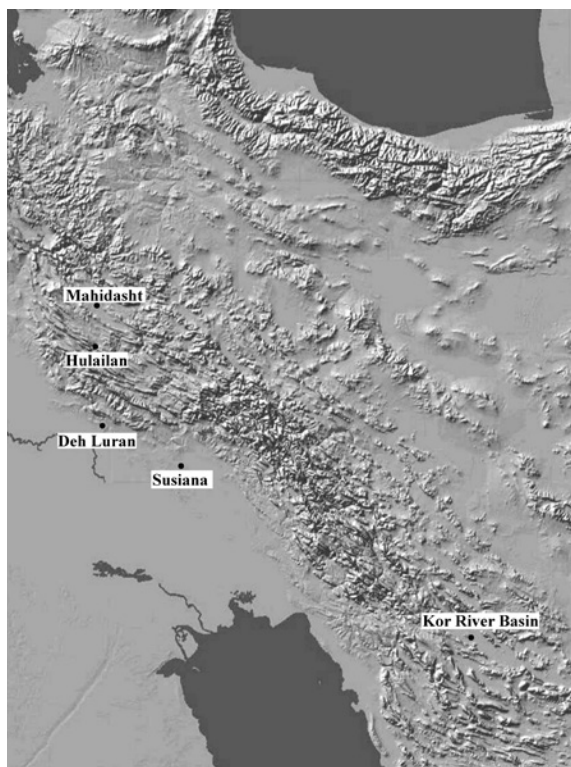
The first five centuries of the sixth millennium BC saw a burst of creativity and innovation in ceramic crafts. This was manifest in experimentation with different vessel forms, the uses of colored slips and incising, and especially in painted designs. Remarkably, each region of the Near East saw similar developments at essentially the same time, but with distinctive regional variants. During the late sixth millennium, innovation in local productions declined and evolved into greater uniformity, both in designs and wares across regions, as represented by the spread of Samarran/Ubaid and Halaf/Ubaid ceramics. These trends and developments are especially well illustrated in four regions of Iran.

Pottery vessels were introduced over some hundreds of years across the regions of the Near East. During the Early Neolithic, pots made with vegetable temper were fired at a low temperature, forms were relatively simple

as befits hand-made vessels, and were often painted. In some cases the surfaces were well smoothed and even burnished, but often surfaces were left uneven to the touch. Depending on region, vessels might have knobs or ledge handles, but most lacked such features. Painting tended to be simple strokes irregularly applied so that every vessel was unique.

Once pottery had been in service for some time –perhaps a few generations– a creative explosion took place, with styles of decoration and wares displaying new combinations of color and design rapidly replacing one another or co-existing. The burst of creativity ebbed by 5500 BC, when people settled on fewer wares and more consistency in design. The greater homogeneity across the region was expressed in Samarran-derived designs and Halaf motifs in the North and Samarran/Ubaid-derived wares and designs in the South and East. Eventually, Ubaid-related wares spread across the entire region from the Euphrates to the Zagros. In

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**Figure 1.** Locations of regional examples discussed in the text.

Phase	Types
Mohammad Jaffar	Jaffar Plain, Jaffar Painted, Khazineh Red
Sefid	Jaffar Plain, Khazineh Red, Sefid Painted, Sefid Red-on-Cream, Sefid Black-on-Cream, Sefid Bur-nished, and Sefid Black Painted.
Surkh	Jaffar Plain, Khazineh Red, Sefid Black-on-Cream, and Sefid Painted (with new vessel forms)
Chogha Mami Transitional	Jaffar Plain, Khazineh Red, Susiana Black-on-Buff (CMT style), Susiana Plain Buff, Sialk Black-on-Red, and White-on-Red.
Sabz	Jaffar Plain, Khazineh Red (new forms), Susiana Plain Buff, Susiana Black-on-Buff

**Figure 2.** Neolithic phases in the Deh Luran sites of Ali Kosh, Chogha Sefid and Tepe Sabz.

this paper I examine the creative centuries and ceramic variants in four regions of Iran, a land divided by topography (Fig. 1).

As compared with Mesopotamia, the Neolithic ceramics from Iran show greater variability within and between regions. The reasons for this are varied, but, as Mallowan remarked, within the mountain systems of Iran there are “isolated pocket communities,” and the absence of major rivers “has tended to concentrate homogenous developments within restricted areas” (Mallowan 1954, 16). The contrast with the relatively open landscape of Mesopotamia and its two rivers that run the length of the land is obvious and striking. Equally striking and supporting Mallowan’s observations, the Neolithic ceramics from Mesopotamia are relatively undifferentiated as is evident in the Hassuna and Halafian periods. This is not to say that there is no regional differentiation, rather that it is strikingly less than we see in Iran. Here we examine four sequences of changes, which illustrate the diversity, and each sequence terminates in a region-wide ceramic change that ushers in a long period marked by uniformity in wares and similarities in painted designs.

In this paper *variability* is defined on such attributes as paste, tempering material, surface treatment, including slips of various colors, painted designs and vessel

forms. In the literature, combinations of these may be referred to as “wares” or “types.” *Innovation* refers to changes in vessel forms and style of decoration, tempering and firing.

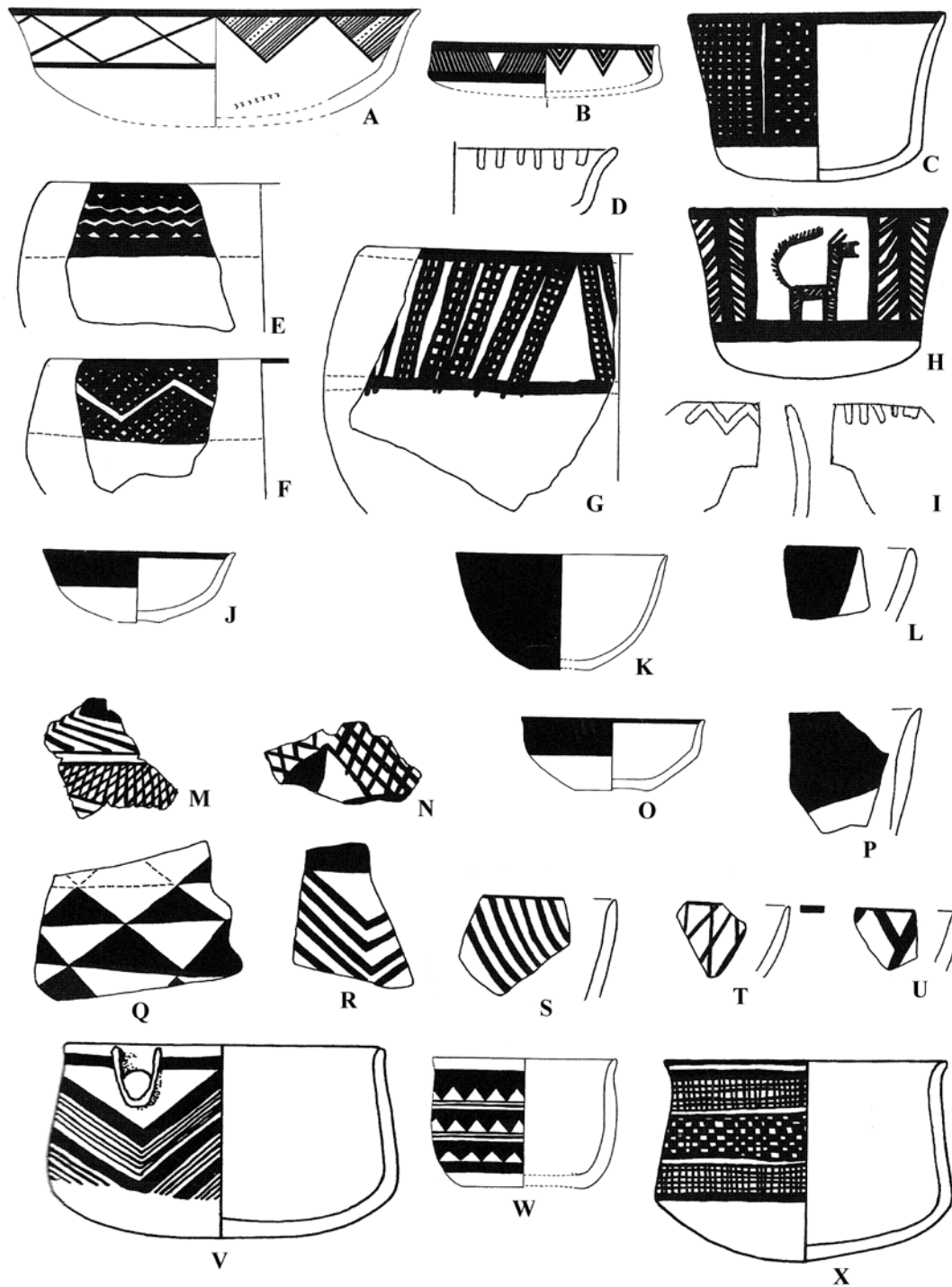
There is little consistency in the ways wares and types are defined, but all authors make distinctions that can be counted. Similarly authors differ in the way they segment their sequences, e.g., phases, sub-phases, and levels.

*Diversity* refers to differences in attributes between regions. Different authors report wares and types in different ways, but they make distinctions that can be counted, e.g., four types in the Mushki Phase.

The four regions to be compared are two piedmont/lowland plains, Deh Luran and Susiana, and two intermountain plains, little Hulailan and Fars, the latter much larger and more open (Fig. 2). In each, excavations have revealed sequences of Neolithic ceramics that illustrate both change and diversity.

## DEH LURAN

The longest and best known sequences are from the Deh Luran sites of Ali Kosh, Chagha Sefid, Tepe Sabz and Farukhabad, which encompass the earliest Neo-



**Figure 3.** Examples of ceramics from Deh Luran. (Figures from Hole 1977, Hole/Flannery/Neely 1969).

A Chogha Mami Transitional; B, C, H Sabz Phase; D, I White-on-Red; E-G Sialk Black-on-Red; J, Surkh Black-on-Red; K Sefid Black Painted; L Maroon-on-Cream; O Black-on-Cream; L, P Maroon-on-Cream; M, N, Q-U Red-on-Cream; V-X Jaffar Painted.

lithic through the Bronze Age (Hole 1977; Hole/Flannery/Neely 1969; Wright 1981), but only the first three sites are relevant to this paper.

The Neolithic ceramic sequence has six phases: Mohammed Jaffar, Sefid, Surkh, Choga Mami Transitional,

and Sabz. Within each phase there are types, as shown in Figs. 2, 3 (Hole 1977; Hole/Flannery/Neely 1969). (Fig. 3).

During the Ceramic Neolithic, eleven types appeared; some existed throughout, but others were diagnostic

Phase	Types
Formative Susiana	Coarse Straw Tempered, Red Burnished, Smear Ware
Archaic Susiana 0	Jaffar Plain, Khazineh Red, Sefid Painted, Sefid Red-on-Cream, Sefid Black-on-Cream, Sefid Burnished, and Sefid Black Painted.
Archaic Susiana 1	Standard Painted Burnished, Standard Straw Tempered
Archaic Susiana 2	Dense Sandy Ware, Red-line/Band Ware, Dark Painted, Standard Straw Tempered
Archaic Susiana 3	Matte Painted, Close-Line Ware, Straw tempered Smoothed
Susiana 1	Standard grit tempered Plain, Standard grit tempered Painted, Red Washed

**Figure 4.** Neolithic phases in the Susiana sites: Chogha Bonut, Chogha Mish and Tula'i.

of only short periods. The variety is not only in painted designs, but also in the combinations of slip and paint colors. Currently no region other than Susiana displays as much variability in the outward appearance of ceramics. The Sefid Phase saw the greatest experimentation and thereafter it diminished. While there is little doubt that the first three phases manifest purely local developments, the CMT was intrusive and developed into relatively crude Black-on-Buff wares in the Sabz Phase, before the more widely known "Susiana" Black-on-Buff sequence began.

We can regard the sequence from Mohammad Jaffar to Sefid to Surkh as an essentially internal development in the sense that the vessels share a soft, chaff-tempered fabric. On the other hand, the Red-on-Cream, Black-on-Cream, and Black-on-Red introduce an entirely different mode of decoration, in which design patterns are replaced with solid panels and bands on variable backgrounds.

With the CMT and Sabz Phases, we find two major changes: the use of sandy grit temper and the earliest manifestation of Black-on-Buff ceramics that continues through the end of the fifth millennium. The CMT is an import to Deh Luran from Mesopotamia, and is analogous to the proto-Halaf of the Jazireh. It is also found with two wares that may come from sites outside the piedmont. By the Sabz Phase, these extraneous sherds have disappeared and the sequence in Deh

Luran continues in what appears to be a local variant of the Susiana sequence of Khuzistan, but with lesser variety.

## SUSIANA

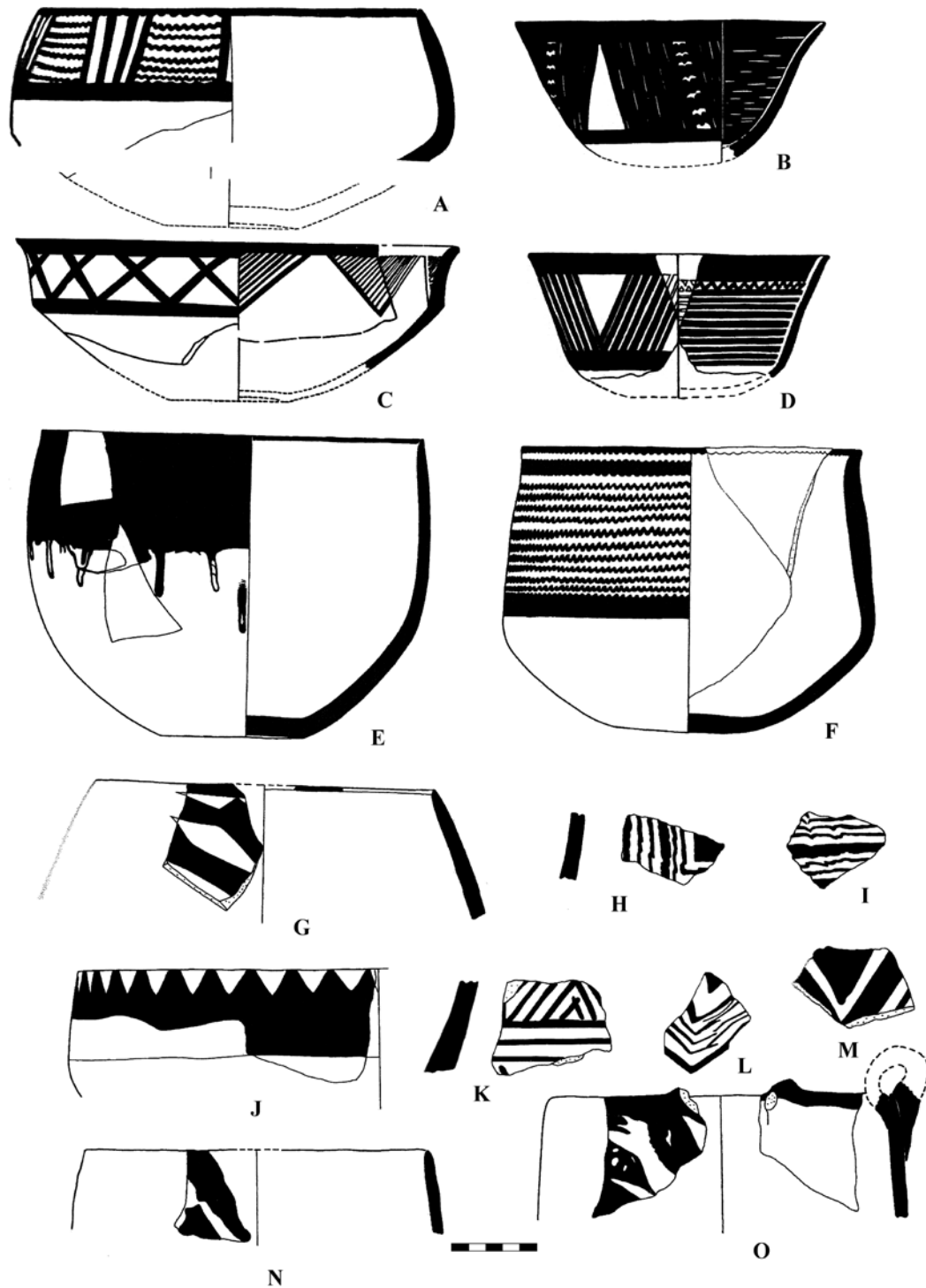
Two sites, Chogha Mish and Chogha Bonut provide the Neolithic sequence, augmented by a small excavation at Tula'i (Alizadeh 2003, 2004; Hole 1974). Helene Kantor described the Chogha Mish ceramics by type, without clear stratigraphic context; however the inferred sequence essentially matches that of Deh Luran (Figs. 4, 5). Pottery comparable with the Mohammed Jaffar Phase has not yet been described, but *Formative Susiana*, with coarse, straw-tempered, and smeared paint wares, may be. However, this short-lived phase is considered to be "an experimental stage in manufacturing painted pottery" (Alizadeh 2004, 44).

This is followed by *Archaic Susiana 0*, an assemblage with Maroon-on-Cream pottery, also found at Tula'i and similar to the Sefid Phase. Alizadeh's discussion of the sequence recognizes that the ceramics from Chogha Bonut are older than, and only partially overlap, with the sequence that continues with Chogha Mish Archaic Susiana 1.

*Archaic Susiana 1* has Standard Painted Burnished Ware. *Archaic Susiana 2* has Red-line/Band Ware, with fine grit or sand temper. This ware is equivalent to the CMT of Deh Luran. *Archaic Susiana 3* features Matte Painted, Dense-Sandy, and Close-Line wares, all of which are also similar to CMT. (Fig. 4).

Comparisons between Deh Luran and Susiana are obvious, although there are specific differences in design elements and forms (not discussed here). Each region develops along the same trajectory and sees the introduction of foreign elements in the Late Neolithic, which establish the baseline for a new trajectory of change that has much to do with the Ubaid of eastern Mesopotamia. The essential separation of the piedmont Neolithic sites from Mesopotamia prior to the CMT is reinforced by the absence of typical Hassuna types. With the CMT/Archaic Susiana 3 there is the reduction in wares—a simplification of the ceramic inventory and an end to the creative innovations seen earlier.

Deh Luran and Susiana exhibit characteristics of both a closed and open system. Closed because they comprise closely similar sequences that are not paralleled elsewhere; open because the two distinct regions are similar despite the distance between them. The piedmont is a relatively open northwest-southeast corridor along the base of the Zagros. Indeed it was part of the ancient "Achaemenian Highway," used by Persian kings and other travelers, and some intercourse along

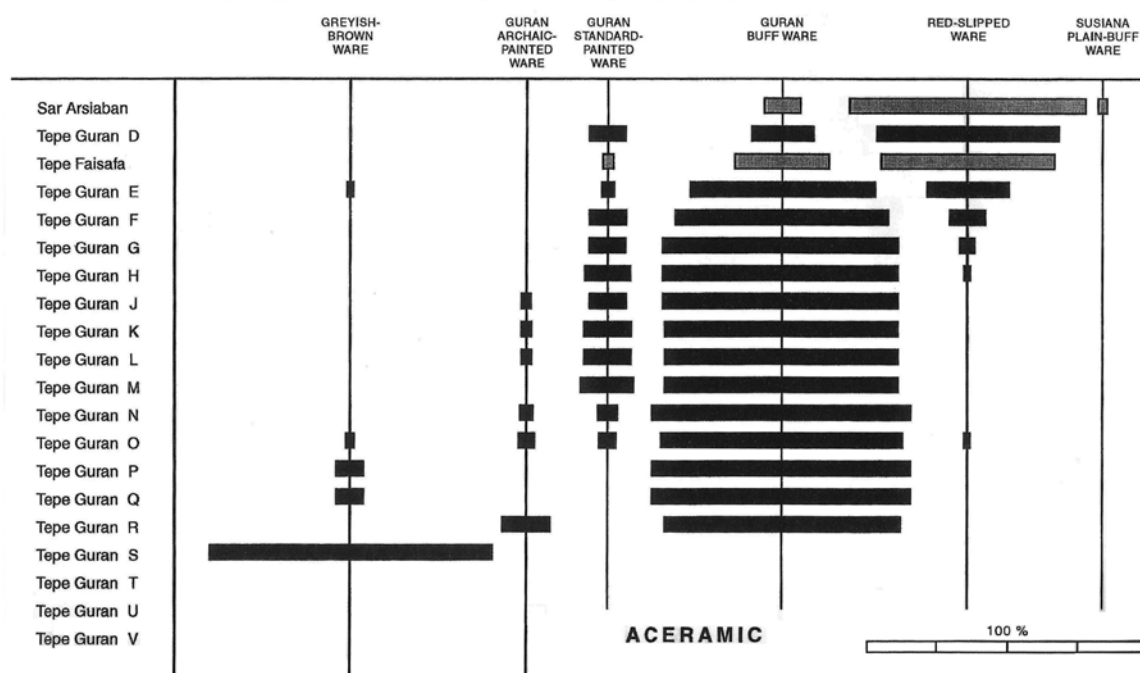


**Figure 5.** Examples of Susiana Ceramics (various scales) A, E–O Chogha Bonut :Figs. 24, 26, 28); B–D Chogha Mish (Delougaz/ Kantor 1996).

A, F Painted Burnished; B, D Close-Line; D Chogha Mami Transitional; E Broad Painted; G Red Slip; H, I Maroon-on-Red; J Black-on-Cream; K, L, M Maroon-on-Cream; N, O Smeared Ware.

the mountain front no doubt existed during the Neolithic as well. However, the long stretch of the “highway” from Susa to the pass via Ilam leading to the plateau is largely waterless, dry steppe. Westward from Susiana, only at Deh Luran and Mehran are there streams and

large expanses of arable soil. While there are obvious parallels between Deh Luran and Susiana, they are not as strong with the next arable plain to the west, Mehran, where connections seem stronger with Mesopotamia (pers comm, Ardeshir Javanmardzadeh). The Zagros is



**Figure 6.** A seriation of Neolithic pottery at Tepe Guran (Mortensen 2014: Fig. 75).

a formidable mountain mass with few passes that make for easy travel, so in spite of the proximity of mountain valleys, they developed independently.

### THE HULAIN PLAIN AND MAHIDASHT

The Hulailan Plain is a case in point. Situated in a straight line nearly 150 km northwest of Deh Luran, but with no pass to the piedmont through the formidable Kabir Kuh, it was unlikely to have had close interaction with the lowland sites. The small Hulailan Valley lies at an elevation of 900–1000 masl and is part of the headwaters of the Saimarreh River. With relatively little arable land and surrounded by mountains it is a “closed” environment.

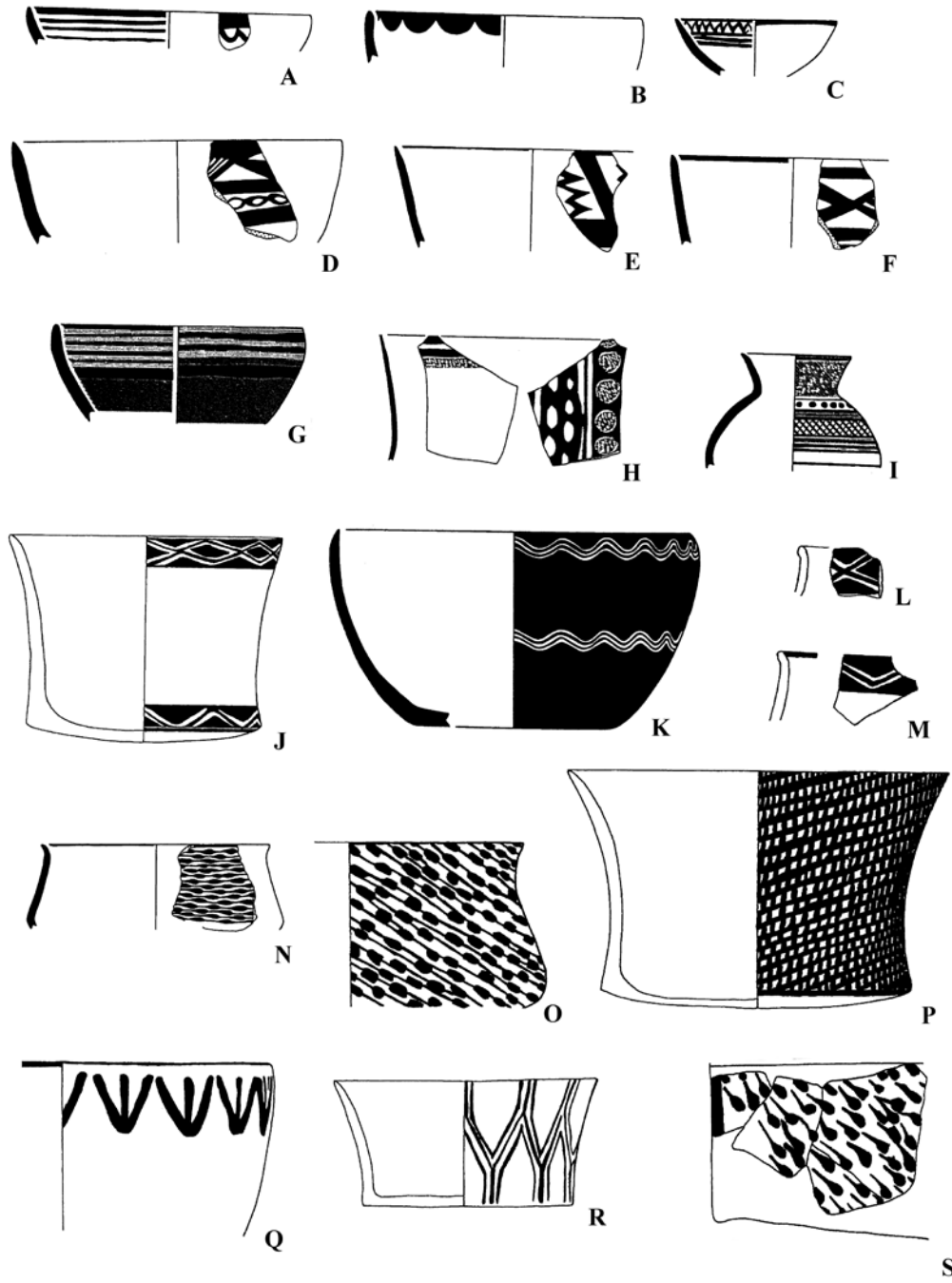
The site of Tepe Guran provides the essential sequence (Mortensen 2014), although it is not subdivided into phases; rather ceramics are recorded by level (Fig. 5, 6). The sequence started somewhat earlier than at Ali Kosh/Chagha Sefid with a crude Greyish-Brown Ware. This was followed by Archaic Painted, a style very different from Jaffar Painted. The sequence continues with Buff Ware and Standard Painted, which is recognized in three successive styles: Jarmo Style, Guran Style and Sarab Style, none of which is similar to the painted vessels of Deh Luran. In fact, the closest parallels to Standard Painted are with Jarmo in Iraqi Kurdistan and Sarab in the higher valley of Kermanshah (Mahidasht); hence the naming of the styles. The wide geographic spread of these styles suggests an interaction zone ex-

tending roughly Northwest-Southeast along the valleys of the Zagros. Additionally there is Red-slipped Ware, which is confined to the latest levels of Guran (Fig. 7).

Unfortunately the excavated sequence ends earlier in Hulailan than in Deh Luran and Susiana, but it can be followed in the Mahidasht where, based on surveys and small excavations, there is a Later Neolithic (Levine/McDonald 1977; Levine/Young 1987). This is found at Sarab and basal Siahbid and features “red-slipped burnished ware, sometimes painted with thickly applied white paint...and a black slipped ware with the same white paint” (Levine/Young 1987, 17). Surveys have also found “J Ware,” which is attributed to a variant of Halaf. Some of these sherds bear white paint reminiscent of the Surkh White-on-Red of Chagha Sefid. The Mahidasht was something of a melting pot of interleaving ceramic cultures during the Middle Neolithic, with both J Ware and Dalma Painted occurring on sites (Levine/Young 1987; McDonald 1979). While the earlier ceramics suggest interaction along the Northwest-Southeast folds of the Zagros, similarities in the Late Neolithic are with the higher valleys to the east. The early sequence comes to a close with the appearance of Black-on-Buff, Ubaid-related ceramics.

### KOR RIVER BASIN

A final example of Neolithic diversity is from the Kor River Basin (KRB), a relatively large, elongate system,



**Figure 7.** Examples of ceramics from Tepe Guran and sites in Mahidasht (variable scales) Mahidasht figures A–I, N from (Levine/Young 1987); figures K–S from Hulailan from (Mortensen 2014).

Mahidasht sites: A–C Black-on-Buff, Late Siahbid; D–F Black-on-Buff, Early Siahbid; G–I J-Ware; L, M, Sarab Style; K Late Neolithic; Tepe Guran: J Sarab Style; O, S Jarmo Style; P Guran Style; Q–R Archaic Painted.

the site of the Persian capital Persepolis, and traditional seasonal pasture for transhumant tribes. The valley is isolated from the locales previously discussed by the rugged Bakhtiari Mountains and distance.

Excavations at five sites provide the sequence: Mushki, Tol-e Bashi, Jari B, Kushk-e Hezar, and Bakun B1, while the latest phase, Shamsabad, is found at Jari

A (Alden *et al.* 2004; Alizadeh 2006; Fukai/Horiuchi/Matsutani 1973; Nishiaki 2003; Pollock/Bernbeck/Abdi 2010; Hole/Flannery/Neely 1969). So far an early ceramic Neolithic has not been found, perhaps an indication that settlement had not yet advanced into this region; pottery may have arrived in a well-developed form. While there are stylistic changes, which denote

Phase	Types
Muskhi	Plain Coarse Ware, Painted Burnished, Red Slipped Ware, and Painted Buff Ware
Bashi	Coarse, Unpainted, Black-on-Red, Black-on-Buffer, Red Burnished, Black-on-White Wash, Red-on-Buffer, Black-and-Red-on-Buffer, and Red-on-Red. Any of these might be solely vegetable tempered or have some mineral temper
Jari	Coarser and Finer plain wares and Painted Buff Ware.
Hiatus	
Susiana 1	Standard grit tempered Plain, Standard grit tempered Painted, Red Washed
Bakun B2	“Completely different classes of pottery” (Alizadeh 2006:11)

**Figure 8.** Neolithic phases in the Kor River Basin sites: Jari B, Bashi, Jari A, Bakun B1.

two or three phases, depending on how the sequence is divided, the developmental consistency was built of “soft, crumbly, thick-walled, dark core” fabrics formed in a basket (Alden *et al.* 2004, 37; Alizadeh 2006). Despite the relatively low technical competence seen in the low-fired, coarse wares, there is considerable variety in the wares. These imply an innovative approach within the constraints of unsophisticated techniques of manufacture. In the reports, wares are defined by their color, surface treatment and whether painted or not (Fig. 8 and Fig. 9).

Designs that occur in the KRB seem to reflect indigenous development, for already in the Mushki Phase there are design elements that appear to be likely antecedents to the Bashi Phase and these segue into the Jari designs, albeit with a reduced number of design elements and wares. Pollock and Bernbeck refer to the obvious standardization of designs within the region as a case of people favoring sameness over innovation. This comment seems apt despite the proliferation of ware variants during the Bashi Phase. As in the other regions, the local developments were replaced by variants of Black-on-Buffer wares, known as Bakun B2 (Alizadeh 2006, 11).

## DIVERSITY

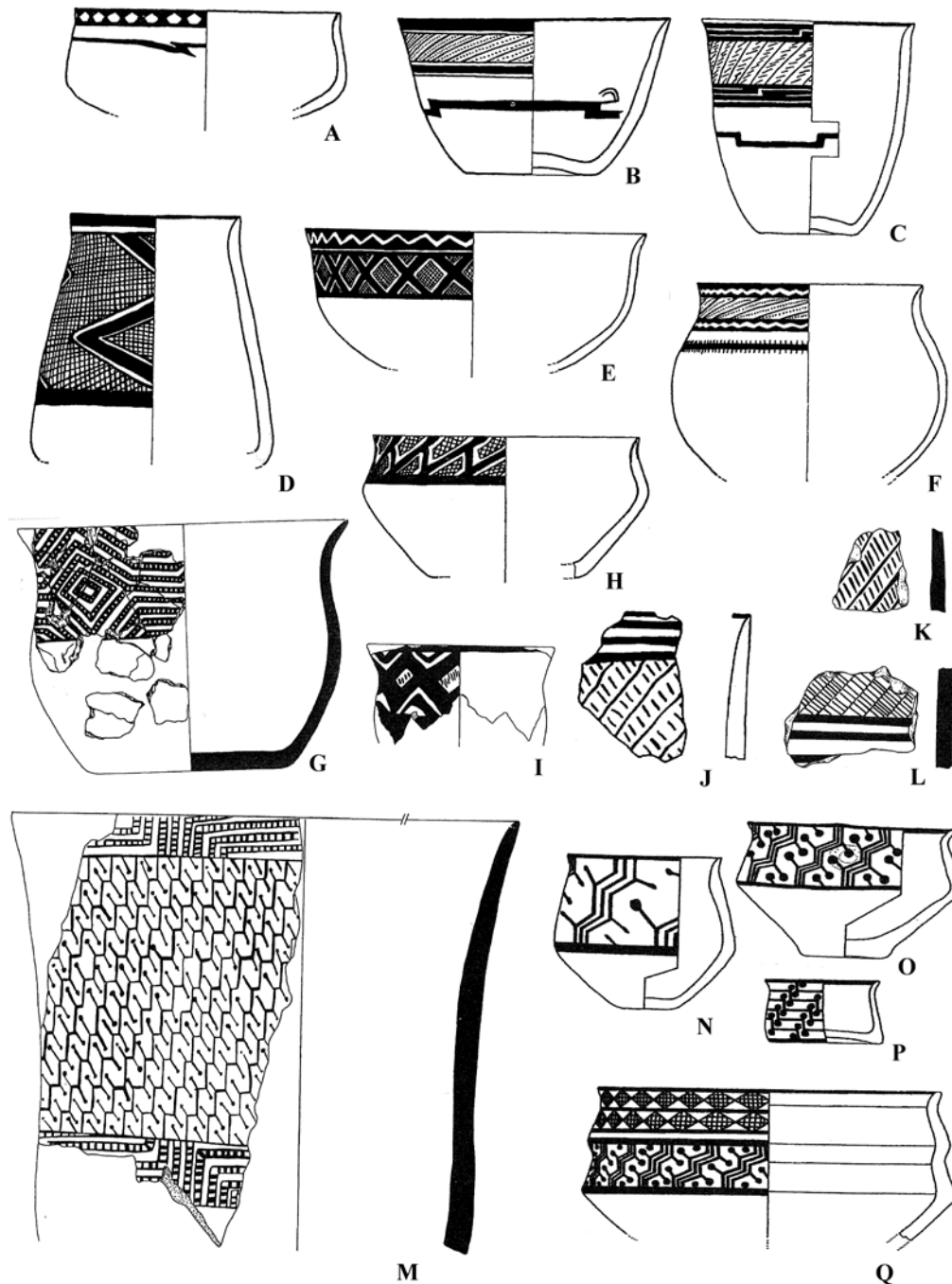
This brief overview of the Ceramic Neolithic in Western Iran reveals striking regional differences in the use of designs on pottery. In some regions, styles change rapidly and there is greater variability in the wares, while conversely, there is a slow pace of change and greater internal consistency in others. In some regions there is a compulsive obsession with careful rendering of paint in repetitive ways, while in others there appears to be a disregard of such norms.

## WHY DID A CREATIVE BURST TAKE PLACE?

Although clay had been formed, used and fired for perhaps tens of thousands of years in the form of figurines, containers and fire pits, the first use that may have pre-saged pottery is bins for storage. An example is the site of Ganj Dareh where a fire destroyed the settlement, baking in place clay bins (Smith/Crepeau 1983). Similar accidents may have occurred repeatedly before people recognized that clay could be formed and fired into useful objects. Once the quality of fired clay was recognized –perhaps many times across the Near East– it was adopted for limited uses. In Iran (but not Mesopotamia) primitive pottery was not durable, but could hold liquid and may have been adopted for that purpose. Once the advantages of the new technology were recognized, its uses grew and containers for different purposes emerged. Not the least is the use of pots for cooking and storing liquids, which must have had an important effect on food preparation and storage.

Manufacture of pots was most likely a purely domestic activity by groups of people in a settlement sharing techniques. Experimentation led to making pots with different surface treatments and shapes to serve different purposes. For example, pots for cooking required careful tempering to ensure that they would endure the fire, and such pots could be burnished or slipped to reduce their porosity. Vessels for serving food, either dry or moist, could be made for individual use and decorated for identification or display. With the idea that clay was malleable and adaptable to a range of tasks, the way was open to exploit this variability. Over a few hundred years we see that local potters created variety within the constraints of their limited knowledge of tempering, firing and slipping, and the products generally became more durable and the decorations more elaborate.





**Figure 9.** Examples of ceramics from the Kor River Basin (variable scales).

Mushki illustrations from (Fukai/Horiuchi/Matsutani 1973: Figs. 3–6), (Maeda 1986), Jari B (Hori/Maeda 1984), and H, I, K–M Tol-e Bashi (Pollock/Bernbeck/Abdi 2010) A–I examples of Jari Phase ceramics; J–Q examples of Mushki Phase ceramics.

**WHY WERE SOME REGIONS MORE CREATIVE THAN OTHERS?**

As Mallowan remarked, the topography of Iran results in many relatively isolated enclaves. In a sense these are “closed” as opposed to the openness of northern Mesopotamia. Whether a region is open or closed

is difficult to assess *a priori*, for these conditions depend not only on geography, but also on modes of economy—for example year-round agriculture in a rich environment, versus seasonal transhumance of all or part of the settlement. It may also depend on whether a site or region has routes that can facilitate trade and travel, and whether needed resources are

available locally. Rivers, suitable soil, precipitation, sources of fuel, and other resources, can also affect self-sufficiency of settlements. While we cannot know such things directly, we can gain some appreciation for what they may have been from carefully charting the way ceramics develop and change. Creativity occurs in a milieu of curiosity, accident and experimentation, and it can take place when it is not discouraged. Both the experimentation with pottery and quality of painting changed with the later Neolithic as its utilitarian novelty faded and specialists came to dominate production of the decorated wares.

### DID CREATIVITY CEASE AROUND 5500 BC?

During the 500 years of the early and middle Neolithic, populations and settlements grew rapidly on an agricultural base. New techniques for making pottery emerged, including the use of a tournette, molding methods for forming pots, the introduction of mineral temper, and firing temperatures that exceeded those of earlier stages. All of these allowed for greater standardization and exploitation of the utilitarian qualities of pottery. There also emerged individuals who were specialists in the painting of pots, and many of these adopted distinctive styles. The emergence of much wider regional similarities is a sign of both population increase and greater connections between regions. Thus creativity did not “cease,” but its nature changed. In the Late Neolithic, innovation was in the qualities of the vessels and the specialized array of forms for diverse purposes. From this time onward there are suggestions of specialist production along with continued domestic production in the households. For example, in Deh Luran this is manifest in the continued uses of red slipped and burnished wares. The continuity during the Neolithic was broken with the intrusion of Ubaid-related wares, which had little in common with their predecessors. In many regions this is denoted by a break in the sequences.

### CONCLUDING REMARKS

The introduction and spread of pottery occurred at roughly the same time across the Near East. Like the introduction of any new technology, which opened previously unexplored or unattainable avenues, it lent itself to innovation. Just in western Iran, what at first were simple containers, developed into those with special functions such as cooking and storage of wet or dry material. Individuality began to be expressed through the use of colored slips and painted designs. During the earlier phases of the Neolithic, populations were rela-

tively sparse and concentrated in enclaves separated from one another so that interregional exchanges were limited. By the later Neolithic, as the landscape filled with settlements and routes of movement and trade had become established, the exchange of techniques and designs became more frequent, providing new sources for innovation through syncretism. In the Later Neolithic, specialists came to dominate the productions of wares for service and display, further eroding the strictly regional characteristics.

We can now imagine that there were two sets of “Centuries of Creativity.”

The first, lasting some 500, years saw experimentation in wares produced by local households. The second set is the Late Neolithic, expressed in very different ways across the Near East, but characterized by specialist production and the effacing of local traditions. While household production remained for some wares, those for display and special functions were created by a limited number of trained artisans. The Ceramic Neolithic thus encompasses two kinds of dynamism: the first, local settlement-centered innovation that characterizes defined regions; the second, multi-settlement entrepreneurial craft specialization, reflecting widening social-economic horizons across regions.

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