

Ugaritic Writing and the Origin of the Semitic Consonantal Alphabet

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[The author compares three alphabets: Ugaritic, Phoenician and South-Arabic in order to find out correspondences between them. He lays out five rules according to which it is possible to explain the graphemic similarities extant between linear and cuneiform script types. All three systems appear to be related to each other, with Ugaritic being close to Phoenician; it is even artificially created to represent linear writing in cuneiform characters. In this way Ugaritic turns out to be a branch of the Semitic consonantal alphabet, akin to other branches of that system. Its study enables us to reconstruct the history of alphabetic writing in the 2nd millenium].

Ugaritic Alphabetic Writing (U) is the most ancient among the known deciphered consonantal alphabet systems. Its documents date back to 13-14th centuries B. C. and may be the earliest known alphabet. This is why the question of the origin of U is decisive for studying the origins of the alphabet itself.

U coexisted in time and space with other consonantal alphabet systems: Phoenician (P) whose earliest documents must be dated to the 12-11th centuries B. C.; South-Semitic (SS) that existed as far as in Yemen in the 10th century B. C.; and several undeciphered or partially deciphered systems: Proto-Sinaitic (PS) usually dated 17-15th centuries B. C. but being most probably of 13th century B.C.¹, the Deir-'Alla (Jordan) tablets of about 1200 B. C. and others². The position of U among all these systems has not yet been established.

U letters have been often compared with the letters of other Semitic alphabets but only on the basis of their appearance and never after any serious research. The comparisons yielded different and often most diverse results. I. M. Diakonoff mentioned only two U and P letters being alike, whereas R. Stieglitz claimed the same for 21 letters (i. e. all but one)³; numbers between these two have also been named (6,9 etc.). The main cause for the diversity of the opinions seems to lie in the underestimation of the specificity of the cuneiform writing and its relations with the linear one.

Cuneiform writing was a highly schematic system having very restricted graphic possibilities. It had only two signs: the wedge and the "Winkelhaken" (la tête de clou, the angular wedge), wedges having two

1. A. G. Lundin, "Deshifrovka protosinaiskoi pis'mennosti", *VDI* 160/1(1983)79-95.

2. The systems have been reviewed in: G. Garbini, *Storia e Problemi dell'epigrafia semitica* (Istituto Orientale di Napoli. Supplemento n. 19 agli ANNALI - vol. 39(1979), fasc. 2). Napoli 1979, pp. 85-94.

3. I. M. Diakonoff, *Iazyki drevnei Perednei Azii*. Moscú 1969, p. 365; R. Stieglitz, "The Ugaritic Cuneiform and Canaanite Linear Alphabets", *JNES* 30(1971)135-139. R. Stieglitz's conclusions were not approved of by later researchers: Garbini, *Storia e Problemi*, p. 40, n. 27.

possible positions –vertical and horizontal⁴–, while for the “Winkelhaken” even its position in the line was irrelevant. The wedges themselves were also abstract elements having neither size nor dimension: one could not distinguish short and long, or large and small signs.

The writing having such a limited set of cuneiform elements had to meet serious difficulties in imitating even the simplest linear forms⁵. It could not imitate lines having different length, lines crossing each other, circles nor depict curves. The writing had to represent them as a sequence of straight lines. It could not adequately show any angles. To find regularities between cuneiform and corresponding linear signs, we compare three related alphabets (U, P, SS) paying a special attention to the components of each sign. Only signs with similar phonetic value are compared.

Comparison along these lines leads to the formulation of certain rules. The most evident of them (rule one) is that the “Winkelhaken” corresponded to a circle⁶. It is proved by the sign for *c*, a circle in P and SS, a “Winkelhaken” in U. The same can be seen for other letters. Two more signs contain a circle in P and SS, namely *t* and *q*; they have “Winkelhaken”s in U (fig. 1). Two more signs lacking in P contain circles in SS: *z* and *t*; they also have “Winkelhaken”s in U (fig. 1). Three other signs have circles in SS but not in P: *w*, *y* and *s*; these signs have no “Winkelhaken”s in U.

Signe	U	P	SS	U lin.
c				
q				
t				
z				
t				

Fig. 1. “Winkelhaken” (tête de clou, angular wedge).

Four more U letters have “Winkelhaken”s, *h*, *š*, *g* and *d* variant, while the corresponding letters in neither P nor SS have circles. It probably does not break the regularity; one should think that these linear forms of U letters have not coincided with corresponding P or SS ones⁷.

4. The U oblique wedge was never stable and can be met only in several sign variants, necessarily having variants without it (C. H. Gordon, *Ugaritic Textbook*, Rome 1965, pp. 13-15). The only stable form was represented by two oblique wedges at right angle to each other (*d*, *g*, *s*), i. e. a combination of a vertical and a horizontal wedges; cf. Edzard, RIA 5, 562b.

5. We deal with linear forms depicted with wedges only for convenience, without solving the problem of which of them had been primar, but cuneiform writing could easily be transferred into a linear form.

6. Cf. Stieglitz, “Ugaritic Cuneiform”, pp. 137-138.

7. The differences could have been not more significant than between P and SS *t* where a rectangle corresponded to a circle (fig. 1); the U letter shows that originally *t* was a circle while in SS, having a strong tendency towards strictly geometric forms, it turned to a rectangle.

Signe	U	P	SS	PS	U lin.
h	∇	^	7		7
h	∇	I	⊗		F
h	∇	-	∅		∅
h	∇	-	∇		∇
h	∇	∇	∇	∇	∇

Fig. 2. Line with an appendix.

Signe	U	P	SS	U lin.
h	∇	-	∇	∇
h	∇	∇	∇	∇
ω	∇	∇	⊙	∇
γ	∇	∇	∅	∇
z	∇	∇)	∇
d	∇	∇	∇	∇

Fig. 3. Successive wedges.

Signe	U	P	SS	U lin.
P	∇	>	(∇)	<
z	∇	-	∇	∇
s	∇	(F)	∇	∇
k	∇	∇	∇	∇
z	∇	∇	(∇)	∇

Fig. 5. Crossings.

Signe	U	P	SS	U lin.
m	∇	∇	∇	∇
t	∇	⊕	⊕	⊕
q	∇	∅	∅	∅
t	∇	-	∅	∅

Fig. 4. Parallel wedges.

Signe	U	U lin.	P	Parc.	SS	PS	PA
o							
b							
g							
h							
d							
h							
w							
z							
h							
t							
y							
k							
š							
l							
m							

Table I. Ugarit alphabetic writing and other Semitic consonantal alphabets.

Signe	U	U lin.	P	Parc.	S'S	PS	PA
d			-				
n							
z							
s							
c							
p							
š							
q							
z							
t							
g							
t							
i/u							
š							

Table I (cont.). Ugarit alphabetic writing and other Semitic consonantal alphabets.

The correspondence between lines and wedges is more difficult to establish; a vertical line was represented by a vertical wedge, a horizontal line by a horizontal one, but an oblique line could be shown by any of them. Even the numbers of linear or cuneiform sign elements might be different. So, no universal rules for the transposition of vertical or horizontal wedges can be found.

Rule two is as follows: a wedge could represent not only a line but also a line with an appendix (though the difference between a line and an appendix is sometimes uncertain). It can be traced in the letter *g*; in P and SS it was a vertical or an oblique line with an appendix corresponding to vertical wedge in *u* (fig. 2). It is expressed almost as well in *z* which in U is a line with two short appendices in the upper and lower parts and two vertical wedges; SS *ʔ* is a circle, a vertical line and appendix ("a tick") while in U it consists of a vertical wedge and a "Winkelhaken"⁸ (fig. 2). The same can be seen in more complicated signs: *ḫ*, *n*⁹ (fig. 2), *h*, *š*, etc.

These letters also illustrate the third rule: a broken or a curved line was represented by three successive wedges. The best examples here are the signs *n* and *h* though the same can be seen in *y*, which appears to depict two parallel broken lines, and in a more sophisticated form of *w* (fig. 3). However, this was the way to show a straight line of three segments in *b*, *d* and *r* (fig. 3).

The fourth rule: two parallel wedges usually represent not parallel lines but an angle. The best examples are *p* and *z* (fig. 4); the same can be seen in *s*, *k*, and *r* (fig. 4).

The fifth rule states that two wedges meeting at a right angle represented crossed lines. It can best be seen in *t*; the same regularity can probably be found in *m* (fig. 5). The rule can be formulated as follows: a crossing was replaced by an adjacency; two lines crossing, by two wedges meeting at a right angle; a line crossing a circle, by a wedge and a "Winkelhaken". It is best seen in *q* and *t*. The letter *t* is the very best example illustrating both kinds of the adjacency.

These rules allow us to reconstruct linear correspondences for any U sign though the result is not always evident; it is even more difficult to decide whether the result is accurate, especially for a complicated sign. To solve this problem one must know the relations between U and P/SS alphabets. Let us try to establish these relations, using the most evident cases as our base.

20 linear form reconstructions can be regarded evident: *b*, *g*, *ḫ*, *d*, *h*, *w*, *z*, *ʔ*, *y*, *k*, *m*, *n*, *z*, *s*, *ʿ*, *p*, *š*, *q*, *r*, *ʔ* (figs. 1-5). They all coincide in the reconstructed forms with the signs of at least one alphabet. 10 signs coincide with the forms of both P and SS: *b*, *g*, *d*, *z*, *ʔ*, *k*, *m*, *n*, *ʿ* and *q*, which enables us to prove the proximity of P and SS (*b*, *d*, *ʔ*, *k*, etc.). When P lacks the sign, U forms coincide with SS: *ḫ*, *z*, *s*, and *ʔ* (figs. 1-5). In 6 cases U forms are similar to P but not to SS: *h*, *w*, *y*, *p*, *š*, *r* (figs. 2-5).

So we come to the conclusion that all three systems are related with U being close to P. U forms resemble SS only when P lacks the signs. It allows us to determine P and U as two representatives of some North-Semitic branch of a consonantal alphabet (NS) opposed to SS branch (Tab. I).

The reconstruction of U linear forms for two thirds of the signs solves the problem of the direction of transmission: whether the alphabet writing had been originally linear or cuneiform. The direction of development is seen in *t*: the cuneiform elements regularly represent a circle with two crossed lines inside it. Development in the reverse direction, from a "Winkelhaken" with a horizontal and a vertical wedge beside it to a circle with a cross, seems improbable. Nor does it explain why the cuneiform *g*, a vertical wedge, turned into a line with an appendix directed left and not into a line with no appendices or with two; why three parallel wedges led to three parallel lines (*ḫ*) in one case and to an angle of three lines meeting (*k*) in the other; why two parallel vertical wedges developed into two vertical lines with a cross-beam (*š*), but two horizontal wedges turned into an angle (*p*).

8. *ʔ* as a vertical and a horizontal wedge meeting at a right angle seems to be a pure graphical variant with a "Winkelhaken" replaced by a horizontal wedge.

9. P and SS *n* had no appendices, but cf. Proto-sinaitic pictograms: snake with protruding head.

So, no regular linear correspondences can be found for cuneiform elements. On the contrary, by regarding linear forms as original we can find strict logical explanations for nearly all cuneiform signs. It results in the statement that U cuneiform alphabet originated from some linear NS alphabet (mid-2nd millennium B. C.) which had been P's ancestor.

The result can be further verified if we have a close look at an independent characteristic of an alphabet –the sign order. It is fixed in all known Semitic consonant alphabets, being purely conventional and unrelated either to phonetical values or to the shapes of the signs¹⁰. However, the tradition of alphabetical letter order was very strong, and the order had been kept since U and P till our modern Latin and Arabic alphabets being changed only after several letters dropped or disappeared.

The sequence of letters in the alphabets of P, U and SS are known, the latter being different with absolutely no coincidences with two others¹¹. P and U sign orders were similar but for a few details which can easily be explained from historical linguistics. Several sounds coincided in Phoenician (and in U) though they were different earlier: *h*/*h*, *d*/*d*, *z*/*z*, *t*/*s* and *g*/*c*; if we omit the signs for the sounds which disappeared from U, the rest would present the P sign order with one exception: *t* and *s* coincided in *š*, but in P the sign was placed where *t* was in U.

So we can speak about the identity of U and P letter sequence: P was the shortened variant of U. It also proves the system's genetic relationship. The probability of mere coincidence is fully excluded. Different systems of writing may well have a few common sign shapes, phonetic values, or even names. At the same time, the change matching of two independent sign series is highly improbable in two different systems¹².

Strict regularities according to which linear signs were represented in cuneiform prove that the U alphabet had been artificially created for representing linear writing in cuneiform. The newer systems followed the technique used in syllabic cuneiform writing for both sign representation and writing material. Both the inner structure of U writing (a consonantal alphabet) and its appearance (signs and their shapes) were independent of former cuneiform writing systems; they followed the tradition of the linear consonantal alphabet.

Three U letters, *s* (*s*, *š*), *i*, *u* are usually regarded as supplementary, added later, because they were placed at the end of the alphabet¹³ and because they had some systematic and graphical peculiarities. *s* had no specific phonetic correlate and was a graphical variant of *s* (*s*). The *i* and *u* signs were highly peculiar for a consonantal alphabet since they reflected the same consonant ' with different vowels. The suggestion that the signs had been invented to represent Hurrian vowels seems possible¹⁴.

Graphically, *i* and *u* were the same sign turned at 90°; its linear archetype had evidently been the SS sign for ' , a drawing of a bull (differing from P ' , a bull's head). The same can be said for *s*: SS *s*, P *s* "fish"¹⁵. They had evident linear correspondences, but the rules for the representation of linear signs by cuneiform writing, established for other cases, cannot be traced here. So, the appendix in *i* and *u* was represented by a

10. Numerous attempts to link sign orders with their phonetical values or shapes have not produced results for any of the Semitic alphabets. Letter names had been supposed to influence the sequences *y-k* "arm"-"hand" and *'-p* "eye"-"mouth" (M. Szyner, "L'origine de l'alphabet sémitique", in *L'espace et la lettre*. Paris 1977, pp. 112-113). The sequences were evidently accidental; SS sign order proves it, having other sequences: *š-r* "tooth"-"head", *y-t* "arm"-"shoulder" (J. Ryckmans, "L'ordre des lettres de l'alphabet sud-sémitique", in *L'Antiquité Classique* 50(1981)698-706).

11. A sequence of two signs corresponds to each of the two systems: *g-t* (U), *g-d* (P). It evidently proves the coincidences being occasional (J. Ryckmans, "L'ordre des lettres", p. 704).

12. Even for the sequence of 8 signs (*d* to *k*) having all the sounds with fully identical letter order this probability is equal to 1:10¹¹.

13. I. Sh. Schiffmann, *Finikiiskii iazyk*. Moscú 1963, p. 14; S. Segert, *Ugaritskii iazyk*. Moscú 1965, p. 18; Gordon, *Ugaritic Textbook*. Rome 1965, p. 12. This point of view has been opposed e. g. in: I. Sh. Schiffmann, *Vozniknovenie znanii o iazyke u finikiian "Istoriia lingvisticheskij ochenii"*. Moscú 1980, p. 60.

14. J. Blau-S. E. Loewenstamm, "Zur Frage der scriptio plaena im Ugaritischen und Verwandtes", *UF* 2(1970)19.

15. S. Segert, *Ugaritskii iazyk*, p. 18.

separate wedge, while two parallel lines were represented by three parallel wedges, all perpendicular to the lines. Similarly the *ś* sign did not show the crossed lines which had been characteristic both for SS and P. Cuneiform elements reflected here the shape of the sign and not its separate elements (Table 1).

These graphical peculiarities prove that the signs for *'i*, *'u*, *ś* were added to an already existing alphabet of 27 signs; they had probably been borrowed from some other linear alphabet, not the one that had served as the archetype for the U alphabet. One can recall here the Phoenician tale of Isiria, Phoenic's brother (the Phoenicians' eponymous) who invented the three letters after the writing had been created by the god Taavt¹⁶. This tale had in mind U writing and different stages of its development.

U appears to be a branch of the Semitic consonantal Alphabet, akin to other branches of that system. Study of it enables us to reconstruct the history of alphabetic writing in the 2nd millennium B. C.

The proto-alphabet (PA), formed in the late 16th-early 15th centuries B. C., was an inadequate writing system lacking strict sign order, having several duplicate signs for the same sound: *'* – "bull"/"bull's head"; *y* – "outstretched arm"/"arm bent at the elbow"; *k* – "hand"/"hand with spread fingers", etc. Several signs had more than one phonetic value: "leg" – *p* (*pa'n*) or *r* (*ragl*); "man" – *ġ* or *ś* (probably *ġulām* "boy" and *śaġīr* "child"), etc.¹⁷ Such a system surely could not have been stable, nor exist for a long period¹⁸.

Stability began with the invention of the alphabetic letter sequence necessary for the continuation of the tradition and for teaching. Such sign orders were created in two places independently and practically simultaneously; they divided all variants of consonantal alphabets into two branches, SS (*h-l-h* alphabets) and NS (*'-b-g* alphabets). All duplicates seem to have disappeared within these branches together with the fixation of the values of the signs *p/r*, *ġ/ś*. At the same time: a) a part of the duplicates still existed; b) the values might not follow the division into SS and NS branches.

The NS and SS branches seem to have existed not as two systems but as two complexes of similar variants. The cultural and political situations in Phoenicia, Syria and Palaestine at that time could be best characterized as ethnical uniformity and political scattering; the multiplicity of small political units led to the appearance of local writing variants.

The SS branch is known only from the Arabian documents from the 1st millennium B. C. although in the 15th century B. C. it was probably also used in Palestine and Syria; the undeciphered Deir- 'Alla tablets may well be assigned to it. The branch had kept the full sign complex for Semitic consonants (29 signs).¹⁹

The NS branch was a 27-sign-alphabet already without *đ* and *ś* that had existed in the PA. The very sign *ś* formed later a secondary pair of duplicate signs *s-ś*, the former value *s* in U while the latter in P and PS. Different NS variants preserved several other duplicate signs, i. e. different signs for *k* and *ś*.

One of the NS variants turned into cuneiform writing in the 15th century B. C. and formed the original U alphabet of 27 letters. The act of transposition of a linear alphabet into cuneiform writing marked the earlier stage of NS writing development. Simultaneously, it separated U from other consonantal alphabetic systems though their interaction still existed. The necessity for writing foreign names and texts fixation led to ways for representing vowels being invented and, correspondingly, to the reform of U. Two additional signs were borrowed, *ś* and *'*, a duplicate "bull". The latter was then transformed into two signs (by means of its being turned at 90°), and the three *'* signs formed a system for representing vowels: *'a*, *'i*, *'u* (though it was never used systematically).²⁰

16. B. A. Turaev, *Ostatki finikiiskoi literatury*. San Petesburgo 1903, p. 42. I am glad to thank I. Sh. Schiffmann for this information and for his kind assistance with this paper.

17. A. G. Lundin, "O proisjozenii alfavita", *VDI* 159/2(1982)17-28.

18. Perhaps PA existed not as a system but as a summary of similar variants having different duplicate signs and different values for *p/r*, *h/w*, etc.

19. See B. A. Levine, "The Deir 'Alla Plaster Inscriptions", *JAOS* 101(1984)195-205.

20. See J. Sanmartin, *UF* 3(1971)173-180.

Both additional signs are known only from SS but they were most probably borrowed from a NS system with the signs: ' "bull" and š "fish" for a usual voiceless sibilant. The cuneiform writing system of U was spread restrictedly and disappeared together with the fall of Ugarit in the 13th century B. C. The way to represent vowels which had been invented in U perished with it.

Further development of the consonantal alphabet was conditioned by that of the Semitic languages. Phonological system changes with the transition of languages to the middle stage consisted of several sounds coinciding and resulted in the creation (13th century B. C.) of a group of shorter 22-sign-alphabets: P, PS and the shortened cuneiform one. The process did not last long: an 'Izbet-Şarḫah ostrakon (ca. 1200 B. C.) with 22 P alphabet signs listed in strict letter order is evidence that the shortened P alphabet was fully formed by the beginning of the 12th century B. C.

All three shortened alphabets, P, PS and the cuneiform alphabet, might have had 22 signs each and were closely related. They represented one alphabetical system and differed only in the style of script: an everyday script with some cursive elements (P), the official or monumental script (PS) and the shortened cuneiform script for writing on clay tablets.