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ON THE ALLEGED "PRE-SUMERIAN SUBSTRATUM"

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1. The "Sumerian Problem"

One of the most discussed Assyriological topics is the "Sumerian problem": Were the Sumerians an autochthonous Mesopotamian population or did they come from somewhere else? In order to answer this question one has to take a look at both the textual and the archeological materials we have. The archeological and environmental evidence seem to allow different, and even contradictory, readings and interpretations.

According to Nissen (1988: 58-60), until the midfourth millennium, most of southern Mesopotamia was either covered by salt marshes or underwent regular inundations, so the south would have had very few and scattered settlements that followed no hierarchically organized pattern. In the transition from the Early Uruk period to the Late Uruk period, Nissen (1988: 66-69) detects different features of discontinuity, especially a change in settlement patterns, and concludes that this change may be linked to the arrival of the Sumerians. However, the same evidence allows a different reading: Joan Oates (1960: 49) regarded the abundance of water in southernmost Mesopotamia as a hunting and fishing potential. She also pointed out that the continuity of some aspects of

I have to thank Philip Baldi, Miguel Civil, Jerrold S. Cooper, Eric Hamp, Tawny Holm, Richard Jasnow, Piotr Michalowski, and Piotr Steinkeller for their insightful suggestions; but the responsibility for the ideas expressed here remains mine. Along with the customary Assyriological abbreviations (CAD, AHw, MEE, etc.), this paper uses also HALAT for L. Koehler, W. Baumgartner et al., Hebräisches und aramäisches Lexikom zum Alten Testament, I-IV (Leiden: Brill, 1967–1990), and Wb. for A. Erman and H. Grapow, Wörterbuch der ägyptischen Sprache, I-V (Berlin: Akademie, 1926–1953).

the material culture in the area from the Ubaid period to the Late Uruk period seems clear (1960: 44–46). In fact, in recent years the evidence concerning sea-levels has been reviewed (Sanlaville 1989; Potts 1997: 33–41), and it has been concluded that they were probably lower in the Ubaid period, which changes absolutely the traditional picture of that marshy and largely uninhabitable early southern Mesopotamia. As Oates argues (1993), southern Mesopotamia was probably far more populated than has been thought, but still it is difficult to know whether the Sumerians were part of that early population or not.

The archeology and ecology of early Mesopotamia, as far as we can understand it, does not really support any strong claim concerning Sumerian origins (Potts 1997: 43–55). The core of the Sumerian problem, therefore, is mostly linguistic and orbits around some basic issues: the invention of cuneiform—i.e., was this (optimally or non-optimally) designed to write Sumerian?—and the possible traces left by the languages of those who may have dwelled in Mesopotamia before the Sumerians, which would show that the latter were not autochthonous.¹ Regarding the

1. Following Nissen's arguments on an alleged archeological discontinuity, Høyrup (1992: 27) has assumed that between Early and Late Uruk, a large body of immigrants came to constitute the majority of the working population in southern Mesopotamia, while the "ruling class" would have been autochthonous. This scenario (similar to that of a plantation economy), and a misleading use of linguistic typology, have led Høyrup (1992) to propose that Sumerian was a creole. Although he suggests that the substrate language would correspond to Landsberger's "pre-Sumerian substratum," the impossibility of identifying both the superstrate and the substrate languages, together with the pitfalls of his typological approach to creoles,

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archaic (or so-called proto-cuneiform) texts from Uruk and Jemdet-Naṣr, the Berlin team working on them has cast doubt on the identification of their language with Sumerian (Nissen, Damerow, and Englund 1993: 9, 116–17; Englund 1998: 73–81). Nevertheless, the existence of both phonetic indicators and some phonetic spellings should eliminate these hesitations (Steinkeller 1995: 694–95; Krispijn 1991–92: 13–18). Thus, we are left with the issue of the traces a previous (substrate) language might have left in Sumerian as we know it, that is, with the question of the alleged pre-Sumerian substratum.

2. The Alleged "Pre-Sumerian Substratum"

The idea of a pre-Sumerian substratum was first proposed by Landsberger ([1944] 1974), and later developed by Gelb (1960: 261–64), Oppenheim (1967: 18–20), A. Salonen (1952: 9–12; 1968; 1969: 97–117), and Diakonoff (1975: 225). Gelb (1960) has enumerated the archaeological, physical-anthropological, literary, linguistic, graphematic, ethnic, and toponymic evidence for such a substrate. Even in a more general cognitive realm, that of numbering and measures, a decimal substratum was thought to have existed in contraposition to the typically Sumerian and Akkadian sexagesimal one (but see Powell 1972: 166–68).

Many designations for occupations and trades have been attributed to this alleged substratum. Since the profession names that are clearly Sumerian, and not pre-Sumerian, would seem to be more sophisticated (šim-mú "perfumer"; ì-sur

"oil presser"; zá-dím "jeweler"; dub-sar "scribe"; etc.), Landsberger (1974: 11-12) concluded that "Mesopotamia was already developed to a high degree before the immigration of the Sumerians, but it was the Sumerians who created the intellectual and artistic values of this culture."3 A similar approach was used by Speiser (1969: 108) who argued that "the Sumerians came to dominate, but did not drive out, the earlier settlers." Speiser had proposed the language of that pre-Sumerian substrate was Elamite (Speiser 1930: 38-58). However, the similarities between Sumerian and Elamite are merely typological and perhaps they may be due to language contact (Steiner 1990). Furthermore, based on the alleged existence of a pre-Sumerian and non-Semitic substratum, Gelb (1960: 262-64) argued that probably both Sumerians and Semites were newcomers in Mesopotamia and this substratum would represent the remains of the language of the previous inhabitants of the area.

The criteria for the identification of non-Sumerian words were mostly phonotactic: they are polysyllabic, while Sumerian seems to prefer monosyllabism; they have similar endings and medial consonantal clusters; and, most important, they had no Sumerian etymologies. A. Salonen (1968: 3) went further and distinguished different patterns, which he assigned to different periods: (C)VC(C) + -ar ("late Neolithic"), (C)VC(C) + -Vb, $(C)VC(C) + V_{g}$, $(C)VC(C) + V_{l}$, and $(C)VC(C) + V_{l}$ -Vn and + -Vn ("early and late Chalcolithic"). Salonen's methodology is not completely satisfactory and, in fact, he included several Semitic and properly Sumerian words in his prehistoric substratum (Diakonoff 1975: 225). Nevertheless, the core of his proposal depends on Landsberger's list (see below) and his chronology is based on the type of technology represented by the words that exhibit those patterns. This chronology, however, assumes the existence of specialized professions

would rule out his theory. Already Christian (1931/32) argued that Sumerian was grammatically a Caucasian language with a mixed substratum, formed by both a Semitic vocabulary and Wortbildung and Sudano-Uralo-Altaic-Tibeto-Burmese phonological features. Thirty years later, Christian (1961) abandoned the use of African material, and inverted the substrate and superstrate roles he argued for in his previous attempt. Now the Caucasian language would have been the language spoken in Uruk IV and III, while Tibeto-Burmese would have been the language spoken by a ruling group that arrived over the sea after Uruk III. No comment is necessary here.

^{2.} In his recent summary of pre-Sargonic history, Bauer (1998: 436–37) contributes to the perpetuation of the theory launched by Landsberger.

^{3.} From a different perspective, M. Lambert reached similar conclusions concerning Sumerian culture. After studying both some Sumerian loanwords in Akkadian and some Akkadian loanwords in Sumerian, Lambert (1963: 81) argued that the Sumerian terms borrowed from Akkadian are proper to the lower class, while the Akkadian terms borrowed from Sumerian are those of the upper class, so the Sumerians appear as a sort of aristocracy.

in Neolithic economies, which is unlikely (Emberling 1995: 102).

Landsberger (1974: 9) identified two different substrata: proto-Euphratic (city names such as Urim, Uruk, Larsa, Adab, Lagaš, and Zimbir—see also Gelb 1960: 263-64)4 and proto-Tigridian (divine names such as Dagan, Zambamba, Amba, Ištar, and Adad). Gelb (in A. Salonen 1968: 3) and Diakonoff (1981: 48 n. 68) have characterized divine names such as Bunene, Zababa, Kubaba, Inana, Igigi, and Aruru, as belonging to a "Banana" language. Moreover, Kienast (1985: 107–9) wants to identify some of these deities, together with others (Alala, Šidada, Bulala, Belili, Izuzu), as substrate goddesses. In spite of his criticisms of the substratum theories, as formulated by Salonen or Landsberger, Diakonoff (1981: 57) thinks that the speakers of that "Banana" language were the predecessors of the Sumerians (see also Gelb 1962: 49). However, Emberling (1995: 102) argues that these Banana or reduplicated names, especially common in the Diyala and Hamrin, "seem to relate more closely to naming practices or administrative shorthand" than to a concrete language. An analysis of the Sargonic texts from the Diyala and Hamrin shows that the Banana or reduplicated names occur in free variation together with the Akkadian names in the names of parents and their children (see Foster 1982; Emberling 1995: 102).

3. Landsberger's Proto-Euphratic Words

Landsberger (1974: 10–11) provided a list of words that were in his opinion part of what he called the proto-Euphratic substratum. Here we shall reexamine them in the light of the contemporary knowledge of Sumerian.

Names of Professions

adgub_x (usually transliterated ad-kub₄, but see Steinkeller 1989: 171) "reed weaver."

4. As George (1992: 238, 253) points out, the two most usual names of Babylon (*Bābil* and probably *Tentir/Tintir*) would fit in the pattern of the so-called "proto-Euphratic" toponyms.

ašgab "cobbler, leather worker." M. Lambert (1963: 80) has argued that his is an Akkadian loanword (aškāpu). The root, however, is not Semitic. Arabic iskāf "shoemaker" is an Aramaic (Syriac) loanword (Fraenkel 1962: 256), which was ultimately borrowed from Akkadian (Kaufman 1974: 39). Nevertheless, Classical and Modern Arabic have several related terms (sakkāf "shoemaker," sikāfa "shoemaking," etc.; see Lane 1984: 1392; Wehr 1976: 418a), but they are secondary formations due to the analogical creation of a root *skf.

azlag (TÚG.UD), ázlag (TÚG), àzlag (GIŠ. TÚG.PI.KAR.DU), azlag₄ (GIŠ.TÚG.KAR.DU), azlag₅ (GIŠ.TÚG.PI.KAR), or azlag_x (LÚ.TÚG; see Steinkeller 1989: 171) "launderer." Perhaps azlag might be an opaque compound with Sumerian etymology: a + zalag "water + "to be bright → to brighten"—the lexical equations zalag (UD) = namārum and namru are wellattested (CAD N/1: 210, 239). A similar opaque compound can be identified in kislah "empty, unoccupied ground" from ki + zalag "clean, free ground," as Steinkeller (1989: 123 n. 370) has pointed out.⁵

báhar (= REC 427 = LAK 742), bàhar (U. BÁHAR), bahar (BAR.BÁHAR) "potter" (PSD B: 46–48; Sallaberger 1996: 3). Although Landsberger (1974) and E. Salonen (1970: 317) think this is a (pre-)Sumerian loanword in Semitic (Akk. paḥḥārum, Arab. faḥhār, etc.), *pḥr is a good Semitic root meaning "to dig (earth)," probably present also in West Chadic (Orel and Stolbova 1995: 413 no. 1924). The Semitic root occurs in two forms, √pḥr (Arab. faḥara, Gecez

5. Opaque compounds (as well as opaque derivation by affixation) are difficult to identify in languages that are written mostly logographically, like Sumerian. Moreover, Old Chinese, for instance, had prefixes, suffixes, and infixes, which are opaque in Modern Chinese (see Baxter and Sagart 1998).

6. G. Garbini and O. Durand (Garbini 1984: 239–68; Durand 1991; Garbini and Durand 1994: 168–71) have argued that the Afroasiatic linguistic family does not exist as such, but resulted from a creolization process through contacts between Semitic and diverse African languages. Besides the practical problems of this theory (see Kogan's [1994] review of Durand [1991]), creolization cannot, by any means, explain the regular sound laws that account for the phonological and morphophonological correspondences between Semitic, Egyptian, Berber, Omotic, and the different branches of Chadic and Cushitic.

faḥara) and, with metathesis, \sqrt{hpr} (Arab. ḥa-fara, OSA ḥfr, Heb. ḥāpar, Akk. ḥapāru, etc.), all meaning "to dig" (see Leslau 1987: 157). Moreover, the irregular reflex of Semitic *h as h in Akkadian has several parallels (Tropper 1995; Kogan 1995).

engar (APIN), probably egar (Krecher 1978: 36–37), "plowman."

/ešbar/ (Landsberger) or just us-bar (Akk. *išparum* and *ušparum*) "weaver."

kurušda (LAK 535 = UŠ-nutillû = KU₇) "fattener of oxen." The actual phonological shape of the word may be close to /kurušt/ (Steinkeller 1980: 185–86), which eliminates the medial consonantal cluster and exhibits a well-known pattern in bisyllabic Sumerian words showing a tautovocalic scheme (in this case, with a final consonantal cluster, CVCVCC).

nangar (to be read nag̃ar, see Sollberger 1966: 155) "carpenter." According to Diakonoff (1975: 225) it is an *Arealwort*, related to Eg. *ndr* ("to do carpentry," "to work wood"; see *Wb*. 2: 382; Hannig 1995: 450a⁷; see also von Soden 1981: 171 n. 8). The resemblance to Arabic *najara* (Semitic √ *ngr*) "to carve" (*najjār* "carpenter" etc.) is clear (see Wehr 1976: 944). This is a well-attested Semitic root (Ugaritic *ngr*, Aramaic *naggārā*, etc.), but Salonen (1952: 10−11), who also takes into account Egyptian *ndr*, regards it as a pre-Sumerian word borrowed from Sumerian by Semitic languages.

nimgir (MIR, probably to be read just nigir, see Krecher 1978: 54; Steinkeller 1989: 101–2, 239) "herald."

nu-bànda "foreman" (see Edzard 1963: 98–102; Steinkeller 1989: 255).

nuhaldim or muhaldim (MU) "cook" (see Edzard 1963: 109 n. 91).

7. Diakonoff (1991/92: 19–20) reconstructs an Afroasiatic root that may be related, *¢ər > *çur > *çrw ("flint, rock"), attested in Semitic (Akkadian şurru "flint, obsidian"; Aramaic ţūr "mountain"; Arabic zirr "sharp flint"; OSA zr "mountain"—cf. Biella [1982: 224], under zwr); Berber (Kabyle a-zru "rock"; Ahaggar a-zəru "rock"; etc.), Oromo (çir "to cut, incise"—perhaps unrelated), Hausa (çūrā "knife lacking handle"), and Egyptian—n3?w (< *n-ʒ̃R-w) "stone splinters" (ndrw); w3?.t (< *w-ʒ̃R-t) "knife" (wdʒ̄.t; this does not occurs before the Greek period, as Richard Jasnow has pointed out to me).

/nukarib/ (nu. ^{§iš}kiri₆—on the different spellings, see Steinkeller 1989: 168–69) "gardener" (see Edzard 1963: 92–93).

simug (DÉ) "smith." The structure of this word (CiCuC) is not unknown in Sumerian (for instance, lirum, zikum).

sipa(d) (UGULA.UDU) "shepherd," and also kabar or ga-ba-ra < Akk. *kaparum* (Falkenstein 1960: 312; Diakonoff 1967: 54; 1979: 18; Komoróczy 1978: 235; Oberhuber 1981: 258); udul [ÁB.KU]; and nagad, all being different kinds of shepherds.

šabra (PA.AL), name of an official responsible for dividing the land and keeping the land register. Probably, it comes from Akk. šāpirum (see Falkenstein 1960: 312; Lambert 1963: 80; Goetze 1970: 41; Komoróczy 1978: 235; Oberhuber 1981: 258) and was borrowed, perhaps, in the Old Akkadian period, since it exhibits the final -a like ugula (see Gelb 1961: 146–56).

šidim (DÍM) "mason." Several Sumerian words present the same phonotactic pattern (libiš, šilim, etc.), and many of them are Semitic loanwords (Civil 1996). Moreover, šidim resembles some other Sumerian words exhibiting an X-dím pattern: kù-dím "metalsmith," zadim or za-dím "lapidary," etc. Perhaps, one could even propose a possible etymology as an opaque compound: sig₄ + dím "brick-maker → mason, builder."

šu-ha-da "fisherman" (as Akk. *šuḥaddākum*, but the reading of ŠU:HA seems to be šuku_x, probably /šuku(d^r)/, see Englund 1990: 230–34).

tibira (DUB.NAGAR in the Fāra and Ur III periods, but later URUDU.NAGAR, see Steinkeller 1989: 176) "metal worker." In fact, the word has two spellings, tibira and tíbira (KA×KIB), the latter equated to tamkāru, for instance, in the lexical list lú = ša (IV 263 [MSL 12 137: 263]: KA×KIB = ti-bi-ra = tamka-ru); see Limet 1960: 15. As Hallo (1996: 69) points out, the meaning "merchant" is secondary, so "craftsman" seems to be the original. tibira is probably a Hurrian loanword in Sumerian: Hurrian tabiri "he who has cast (metal)," a non-finite verbal form from the verbal root tab-/taw- "to cast (metal)" (see

Wilhelm 1988: 50–52). Ugaritic *tbl* "smith" has the same Hurrian etymology (Dietrich and Loretz 1990).

ugula "supervisor," a clear Semitic loanword, from Akk. *waklum* (Edzard 1960: 252; Lambert 1963: 80; Komoróczy 1978: 235; Oberhuber 1981: 257). The final -a (as in šabra) seems to point to an OAkk (or earlier) loan (see Gelb 1961: 146–56).

Agricultural Terms

àbsin (= APIN, and also AB.SÍN) "furrow" (see Civil 1994: 173).

a pin "plow," it may be a *Wanderwort* (see Blažek and Boisson 1992: 21–23); see below.

nimbar "date tree" (on the reading gišnimbar, rather than gišimmar, see Civil 1987: 28-29). As Civil (1987: 29 n. 25) points out, the suggested Semitic etymology for the reading gišimmar is rather unlikely. Such etymology is based on the Eblaitic equation giš-"gišimmar" = sama-lum (VE 399 [MEE 4: 244]) and postulates a hypothetical Semitic word *samar. However, the Semitic words that allegedly would be related to this *samar exhibit a regular correspondence with /t/, never with /t/: Arab. tamr "dates," Heb. tāmār, Aram. tamrā, OSA tmr, etc. (see Leslau 1987: 576a). Furthermore, the internal Sumerian lexical evidence (Proto-Ea 515b; Ea I 232; etc.) points to /nimbar/ as the actual Sumerian word for "date tree."

ù-hu-in "fresh date." It is probably a Semitic word (Akk. *uḥinnu*; OAkk *uḥuinnum*; see AHw 1404). Syriac has two cognates: ¬aḥnā "unripened, green date" (Brockelmann 1928: 12b; Cohen 1970: 15a) and ḥanā "unripened figs" (Brockelmann 1928: 243a). These Syriac forms are probably related to Talmudic Aramaic fem. pl. ¬āḥînît (perhaps to be read ¬aḥyānîyyôt and meaning "plums," according to Jastrow 1903: 40b), and masc. pl. ¬aḥwānayyāy ("plums," according to Jastrow 1903: 39b), and even ¬āhînā "a species of late and inferior dates" (Jastrow 1903: 20a) of red color (Sukka 36b; Ḥullin 46b; see Löw 1924: 341–43; Landsberger 1967a: 18). This sort of "broken spelling," or

rather a sequence $\{-V_1-V_2-\}$, is quite uncommon in Sumerian⁸; other example is $\dot{\mathbf{u}}$ -in-ga^{zabar} (perhaps from Akk. *ingum* "the top part of the plow"; see Civil 1994: 101 n. 19).

ulušin (KAŠ.ÁŠ.A.AN), úlušin (KAŠ.ÁŠ.AN.NA), ùlušin (KAŠ.ÁŠ.AN), or ulušin_x (KAŠ.ÁŠ) "emmer beer."

zú-lum "date." The spelling of the word might point to a loan, but it does not really match the rest of Landsberger's list from the phonotactic point of view.

Several profession names from Landsberger's list have the element /nu-/ (nu-bànda, nuhaldim, etc.—see Edzard 1963; Jestin 1973; Thomsen 1984: 55-56 \$ 50-55). There is no reason to doubt the Sumerian origin of this element, which seems to alternate with lú, as in the case of nu-bànda and Akk. laputtû, luputtû (Edzard 1963: 100-101). A parallel alternation occurs in the negative verbal prefix /nu/, which becomes /la/ or /li/ before /ba/ or /bi/, as a sort of dissimilation (see Thomsen: 46 §32; 190 §360). Furthermore, in Ebla there are instances of nu-gal instead of lugal (e.g., ARET 5 24; see Attinger 1993: 156 n. 211a). Although Edzard has stressed the problematic origin of this /nu/ ("eine lautliche Spielform von lú 'Mann' oder von nun 'Hoher'" [Edzard 1963: 111]), the variation lú/nu is probably a merely graphic phenomenon of the writing interface rather than a actual allomorphic alternation.

If one looks carefully at Landsberger's list of substratum words, many of them happen to be Semitic loanwords (báhar, ugula, ga-ba-ra, sabra, and perhaps also ù-hu-in), Hurrian (tibira), Arealwörter or Wanderwörter (apin, nagar), have the /nu-/ prefix (nu.giškiri6, nu-bànda, nuhaldim), or exhibit well-attested Sumerian patterns (simug, šidim). In spite of this, one is

8. Spellings such as u₄-hi-in (for instance in Hh 24: 261ff. [MSL 11 86: 261ff.] and in Hh 3: 328ff. [MSL 5 120: 328ff.]) and ú-hi-in (for instance in Hh 16: 50 [MSL 10 6: 50]) seem to occur only in lexical lists and as a Sumerogram in Akkadian texts (for instance, in the series šumma ālu, CT 40: 45 3′; see Landsberger 1967: 12). Both spellings may well be due to later Akkadian influence, the original Sumerian being reflected in OAkk uhuinnum.

still left with the part after the /nu-/, which in several cases seems not to be Sumerian. One of the alleged features of the structure of substratum words, a medial consonantal cluster, disappears in several cases (nigir, nagar).

Landsberger (1967b: 176–78) tried to show that dam-gàr "commercial agent" was a typical Substratwort (/-ar/ ending and medial consonantal cluster) of the proto-Euphratic stock (Landsberger [1944] 1974: 12). There can be little doubt, however, that it is a loanword from Akkadian tamkāru (Falkenstein 1960: 312; Lambert 1963: 80; Diakonoff 1967: 54; 1975: 225; 1979: 18; Steiner 1977: 16; Oberhuber 1981: 257).

Critiques of the substratum theory have underscored its lack of coherence (Kraus 1969: 201; but see also Diakonoff 1975: 225). Even a possible Indo-European origin for some of these substrate words has been proposed (see Komoróczy 1978: 238, 251-52; Whittaker 1998; and see below). Thus, while there exist some words in Sumerian with structural features quite different from those of most of the Sumerian lexicon, it seems impossible to reconstruct such a substratum as a coherent whole. It is true that we are still left with some words of uncertain origin, such as ašgab and abgub_x. These may belong to a hypothetical substratum, to one or various adstrata, and even be mere Kulturwörter. For instance, all the technical terms of the Mesopotamian brewer are not Sumerian (Civil 1964: 85); this does not need to point to a substrate language, but rather to the foreign origin of brewery and its lexicon.

Since toponymy is very conservative, one should expect to find traces of any substrate languages among place names. These non-Sumerian toponyms have been mentioned already, and it can be argued that they point to a Sumerian *Urheimat* outside Mesopotamia (Gelb 1960: 263–64). For instance, Gelb (1960: 264) argued that the Ubaid culture was not Sumerian, because the toponyms in the area in which this culture can be identified seem to be non-Sumerian (*Arua/Arawa*, *Ninuwa*, *Šuruppak*, *Barsip*). Jacobsen (1967), however, has proposed Sumerian etymologies for some of these city names (*Girsu*, *Adab*, *Lagaš*), and Steinkeller (1993: 111) sees the -a(k) ending as

a Sumerian feature (the genitive suffix). Nevertheless, these toponyms (also e.g. Sirara, Umma, Zabala, Nibru) do not present any coherent pattern, and little can be deduced from their existence. Moreover, Sumerian nominal compounds undergo all kinds of internal phonetic developments (assimilation, dissimilation, syncope, etc.), which makes it virtually impossible to arrive at the original etymologies of most toponyms, even if some may have been Sumerian nominal compounds originally. As a corollary to the study of the allegedly pre-Sumerian toponymy, at most, one could propose that the Sumerians were not the only inhabitants of the area, and perhaps not even the first ones, although it is impossible to draw any sound conclusion on migrations, chronology, or history from such isolated facts. Only a tapestry of various possible substrata or perhaps, even more likely, just adstrata comes out of the study of these Mesopotamian toponyms.

4. Indo-Europeans before the Indo-Europeans?

In a recent article, Whittaker (1998) has attempted to identify the pre-Sumerian substratum (Landsberger's "proto-Euphratic") with an until now unkown Indo-European language, which would be the earliest attested language of this family. One has to admit that this IE language would fit in the most commonly accepted evolution of IE phonology and morphology, as a sort of "pre-Anatolian" Indo-European. Whittaker's earliest IE language would still retain the feminine suffix *- \bar{a} (< *- eh_2), which is not attested in the earliest IE branch, Anatolian. It is commonly accepted that Anatolian lost this ending, since traces of it are present in almost all the other IE

^{9.} We do not have here the seemingly uniform picture the so-called pre-Greek substratum offers, with the endings -nthos and -ss/ttos—for instance, the towns of Corinth, Knossos, Amnisos, Tylissos, the river Koskynthos, the mountain Arakynthos, vegetation terms (términthos, huákunthos), objects (asáminthos, plínthos), labúrinthos, etc. But even in the Greek case, the apparent coherence of the substratum does not eliminate the difficulties of its interpretation (see Francis 1992: 481–82; Meier-Brügger 1992: 68–70).

languages (Beekes 1994: 174; Szemerényi 1996: 155-56).10 Moreover, Whittaker's earliest IE would have conserved laryngeal consonants, which remained only in the Anatolian branch (* h_2 and probably h_3 in *Anlaut*, while h_1 disappeared; see Melchert 1994: 64-74)—in fact, his IE would have kept even h_1 (Whittaker 1998: 115), which was lost already in Hittite, probably the only IE language that kept the other two laryngeals, with the possible exception of some traces in Armenian (see Beekes 1995: 144). Although Whittaker's earliest IE does not confront our expectations of a possible pre-Anatolian IE language, there are substantial problems in his reconstructions. Among his proposed two hundred IE loanwords, only a few belong to what has been called the pre-Sumerian substratum, but many are words whose phonotactic structure looks perfectly Sumerian, such as bàd, dùg, gal, nam, túg, dím, etc.¹¹ The vast majority of Sumerian words in his list are bisyllabic, and many of them may have Semitic

10. Some scholars have disputed this, and think that the feminine ending *-ā is a case of parallel innovative development, so Anatolian would present the earliest two-class system of morphological gender (for references, see Szemerényi 1996: 156 n. 1).

11. The case of gal provides a good example of Whittaker's use of the IE lexicon. Its alleged IE etymon (meaning "to be able to") is attested only in two (western) branches, Celtic and Balto-Slavic (see Pokorny 1959: 351).

12. ha-zi(-in) "axe" comes from Akk. haṣṣinum (Gelb 1960: 266; A. Salonen 1952: 8–9; E. Salonen 1965: 14–16; Komoróczy 1978: 236; CAD H 133; AHw 332). Orel and Stolbova (1995: 290) point to a Semitic root "haṣṣ-"axe," supposedly related to Highland East Cushitic "haç-"chopping tool" (Bambala haacce), so AA "haç-"axe" would be connected to AA "hoç-"to break" (Akk. haṣāṣum, see Orel and Stolbova 1995: 296). However, one may point to a Wanderwort by looking at the slightly irregular two sets of cognates, one with initial /g/ or /k/ (Heb. garzen, Arab. karzan, karzam, and kirzīm, Eg. grdn) and another with initial /h/ (Ug. hrnṣ, Arab. haṣīn, Ge-ez haṣṣin, Syr ḥaṣṣīnā)—see HALAT 195a; Kaufman 1974: 54; Leslau 1987: 267a. Moreover, this Wanderwort might be attested also in Indo-European (see HALAT 194a): Gr. axínē, Lat. ascia, Gothic aqizi, etc. (see Pokorny 1959: 9).

13. uru, or iri or ere (see Edzard 1991: 77–78; pace Lambert 1992: 257), or /ürü/ (Steinkeller 1995b: 542), as in Eridu (Poebel 1923: §15; Diakonoff 1967: 50; 1979: 16), comes from Semitic *c̄ir- (Heb. c̄îr, Ug. c̄r, OSA c̄r). Michalowski (1993: 123) has argued that this Semitic word was replaced in Akkadian by $\overline{a}lum$, but iri may come also from another Semitic language spoken in the area. In Ebla, VE 1151 (MEE 4: 323) has the equation uru-bar = i-rí-a-tum /c̄ir-iy-at-um/ (Fronzaroli 1984:

etymologies—such as ha-zi(-in),¹² uru or iri,¹³ and ezen¹⁴—or even Hurrian (tibira). Furthermore, Whittaker bases all his comparisons on a very complex reconstruction of "proto-Sumerian," which would have thirty-eight consonants and six (or nine) vowels.

Whittaker's understanding of Sumerian phonology deserve some comments. Although he thinks that the nasal labial /mb/ (a perfectly common phoneme in, for instance, Bantu languages)¹⁵ is a mere allophone of /m/, he does reconstruct palatalized counterparts for almost every single consonant. Even if one were to accept his variegated reconstruction, these palatalized consonants would be mere allophones—in fact, in most of his examples they occur in contact with front vowels. Curiously enough, in spite of the phonological complexities of his reconstructed "proto-Sumerian," Whittaker (1998: 143 n. 88) is very skeptical about the possibilities of having initial (and final) consonantal clusters in Sumerian, although a careful phonotactic analysis points to their existence. Moreover, Whittaker (1998: 118 n. 3) is willing to embrace Gelb's (1961: 33; see

^{143).} Furthermore, based on the use of UNUG as KI in UDGAL.NUN orthography, Michalowski (1993: 123–24) has suggested that AB/UNUG was the original sign for "city, geographical name, temple," and later on it was replaced by Semitic *c̄ir- "city" (uru, URU), which explains the reading iri_11 of UNUG (Michalowski 1993: 123–24; Steinkeller 1995b: 542 n. 9). Orel and Stolbova's (1995: 228) reconstruction, 'ḡir-, is wrong and based on the semantic resemblance between OSA 'r "hill, citadel" (Biella 1982: 385) and Ug. ḡr "mountain." However, Ug. ḡr is related to Aram. tûr, Heb. sûr "rock," Akk. surru "flint," Arab. zirr "flint"; and, therefore, it is related to OSA z̄r "mountain" (Biella 1982: 224) and not to OSA 'r. There are other examples of this atypical correspondence: Ug. nḡr "to guard," Arab. nazara, Heb. nāṣar/nāṭar, Akk. naṣāru; Ug. ḡm² "to be thirsty," Arab. zami²a, Heb. sāme², Akk. ṣamû.

^{14.} ezen/ezem (EZEN) may come from *wasim, from √wsm, "celebration, festival" (Falkenstein 1960: 312; Oberhuber 1981: 257); cf. Arabic mausim (pl. mawāsim) "time of the year, season, festival, holiday, harvest-time," al-mausim "the Muslim hadj festival (both the place and the time)" (Wehr 1976: 1070a; Hava 1982: 870b). Akkadian isinnum comes from Sumerian ezen/ezem.

^{15.} For discussion and references on /mb/ in Sumerian, see Civil (1972: 222), Steinkeller (1984: 141-42), Black (1990: 109).

^{16.} On final and initial consonantal clusters in Sumerian, see Civil (1973: 33; 1982: 10; 1990); Yoshikawa (1988: 501); Black (1990: 107–8), Schretter (1993), Selz (1995: 255 n. 13), Boisson (1997).

also Parpola 1975) proposal, according to which the series transliterated as {p}, {t}, and {k}, would not be merely voiceless but correspond to the voiceless aspirates /ph/, /th/, and /kh/, and the series {b}, {d}, and {g} would not be voiced but voiceless non-aspirate, /p/, /t/, and /k/. This hypothesis is based mostly on the Sumerian loan words in pre-OB and OB Akkadian: barag > parakkum, dub > tuppum, etc. However, several factors complicate this analysis: (a) OAkk cuneiform does not distinguish between voiced and voiceless stops; (b) the probable existence of several phonological rules such as voicing of final stop before suffixes with initial vowel, e.g. KALAG = kalak but kalaga (Civil 1973). Nevertheless, Sumerian loanwords in Akkadian do not present such regularity (Krecher 1969): Sumerian {b, d, g} can correspond to both /b, d, g/ and /p, t, k/ in Akkadian, while Sumerian {p, t, k} seems to correspond always to /p, t, k/: e.g. temen > temennu "foundation," kar > $k\bar{a}ru$ "quay." A far more important problem, which Whittaker does not mention, is merely typological: as a basic phonological principle, marked phonemes are less frequent than unmarked ones. Thus, one would expect voiceless stops (unmarked phonemes) to be more frequent than voiced stops (marked phonemes). Nevertheless, even most Sumerian morphemes are constituted by voiced stops (probably with the exception of the genitive marker /-ak/). Based on this typological principle, Boisson (1989)—and, after him, Hayes (1997)-argues for a system based on the opposition between aspirates (/ph/, /th/, /kh/ written $\{p\}$, $\{t\}$, $\{k\}$) and non-aspirates (/p/, /t/, /k/written {b}, {d}, {g}). However this typological objection does not take into account frequencies in context (textual frequencies), but merely those in the lexicon (lexical frequencies)—Civil, (personal communication).

Whittaker's hypothesis presents a more important problem: its faulty methodology. His "proto-Sumerian" is based mostly on the phonological shape of the alleged Indo-European loanwords (although also sometimes in Emesal correspondences), but the borrowings are established on the basis of this hypothetical reconstruction of "proto-Sumerian" phonology. This form of circular reasoning undermines his work and invali-

dates his conclusions. One cannot rule out the possibility of some isolated IE loanwords in Sumerian, not as the result of a direct early (too early) contact, but rather as scattered *Wanderwörter* or *Kulturwörter*.

5. Words that Travel

The existence of Kulturwörter, Wanderwörter, and migratory words, which travel together with the technological or cultural innovations they refer to, is well-known in the ancient Near East. Few examples are better than the word for "wine." Semitic *wayn- presents regular cognates in Arabic (wayn), Hebrew (yayin), perhaps Akkadian *īnu*, 17 etc. (see Fronzaroli 1971: 613-14, 632; HALAT 391; Cohen 1996: 6, 534-35). These words might perhaps be related to Egyptian wnš "edible fruit, grape, wine" and wnš.t "wine" (Wb. 1: 325).18 Indo-European also has a fairly regular set of cognates meaning "wine": Greek (w)oînos, Latin uīnum, Hittite wiyana-, Gothic wein, etc. (see Pokorny 1959: 1121; Beekes 1995: 35; Gamkrelidze and Ivanov 1995: 557-58). Even Kartvelian has very similar words: e.g. Georgian ywino "wine," Old Georgian venaq- "vineyard, grapevine" (see Gamkrelidze and Ivanov 1995: 558-61).

Blažek and Boisson (1992) have presented noteworthy evidence that would prove that some agricultural terms were *Wanderwörter* that traveled with the object they named. The Sumerian words for which they have found possible parallels in other languages (Afroasiatic, Dravidian, Indo-European) are níĝ-gál "sickle" (cf. Dia-

^{17.} Akkadian $\bar{i}nu$ or $\bar{i}nu$ is a hapax attested only once in a lexical list and equated to Sumerian mu-tin (Izi G 92 [MSL 13 202: 92]). Although the lexical evidence is rather scarce and fragmentary (CAD K: 202-3), contextual reasons let us think that mu-tin (or mu-ti-in) is the Emesal form of geštin, translated as $\bar{k}aranu$ "wine" in Akkadian. Since in Izi G 93ff. (MSL 13 202: 93ff.) mu-tin is translated also as zikarum "male," ardatum "girl," ardatum "bird," and ardatum "girl," ardatum "bird," and ardatum "can "kasūsu" falcon," doubt has been east on the interpretation of ardatum as "wine" (CAD I/J: 152b; but see ardatum 383b). However, Emesal mu-tin/mu-ti-in clearly had several meanings (Schretter 1990: 236-37) and one of them was "wine," especially in the light of Akkadian ardatum "wine" (CAD M/2: 298-99), which obviously comes from mu-tin.

^{18.} Not to be confused with wns "wolf, jackal" (Wb. 1: 324) and wnst "she-wolf" (Wb. 1: 325).

konoff 1981: 50; Militarëv 1990: 74), mar "shovel" (cf. Diakonoff 1981: 50, 63), gal₄-la-apin "a part of the drill-plow," ur₅ (HAR = HI.ÁŠ) "millstone," uru₄ (APIN) "to plow," ùr (GÁ×NIR) "to drag (over the ground)," ara₃ (HAR = HI.ÁŠ) "to grind," and zar or zàr "sheaf." Some of the connections suggested by Blažek and Boisson are more possible than others, but several do deserve a careful study. Furthermore, possible *Arealwörter* or *Wanderwörter* may be nag̃ar (Diakonoff 1975: 225; 1981: 50 n. 75) "carpenter" (cf. Eg. ndr "to do carpentry," see Hannig 1995: 450a) and apin (see Blažek and Boisson 1992: 21–23).¹⁹

Within the framework of lexical borrowing, Gamkrelidze and Ivanov (1995) have proposed several connections between Sumerian and Indo-European words. Most were uncritically used by Frayne (1993), who based his paper on a resumé of their work (Gamkrelidze and Ivanov 1983a-b), but was unaware of Diakonoff's severe criticisms (1984). Thus, Frayne proposed several IE etymologies for Sumerian words (šèg, gír, etc.) that are quite unlikely, along with some probable Semitic loans (such as urudu).20 The word for horse is a good example of the complexities posed by the study of these possible loans. The reading ansesisí of the Ur III variant, ANŠE.ZI.ZI, of ANŠE.KUR.RA (see Civil 1966: 121–22) would connect this Sumerian term for "horse" with its Semitic equivalents: Akkadian $s\bar{t}s\hat{u}$ (OAss $s\bar{t}sa^{3}um$), Ugaritic śśw and ssw (Ugaritic ś is probably a merely orthographic variant of s, used in loanwords), Hebrew sûs, etc. (see HALAT 704-5). Egyptian śśm.t "horse" (Wb. 4: 276) is probably a Semitic loanword (Diakonoff 1981: 62-63). It has been suggested that this Semitic name for horse may be an Indo-Iranian-or rather just Indicloanword (Salonen 1951: 165; 1955: 21-22; Kammenhuber 1961: 13 n. 45; Gamkrelidze and Ivanov 1995: 478-79, 809; AHw 1051b): Sanskrit ášva-, Avestic aspa-, Old Persian asa-, versus the socalled *centum* forms, like Greek *hippos* or Latin equus, both centum and satem forms coming from an IE *ekwo- (Pokorny 1959: 301-2).21 Diakonoff (1981: 62-63; 1984: 47) questions this connection on the basis of both chronology and phonological dissimilarity. Nevertheless, one can argue that this word traveled together with the techniques of breeding, taming, and training horses (see the Hittite texts attributed to Kikkuli, a Hurrian horse trainer from Mitanni [Kammenhuber 1961; Starke 1995]). This is possible in light of the similarities of both the Semitic and the Indic forms with Hurrian e-eš-ši (e \bar{s} $\bar{s}i$) and iš-ši-ya- (i \bar{s} $\bar{s}iya$ -) "horse" (Kammenhuber 1968: 210; Laroche 1980: 85) and the name of Kikkuli's profession, a-aš-šu-ušša-an-ni "horse trainer," probably equivalent either to Sanskrit aśvá-śani- "groom ← acquirer of horses" (Kammenhuber 1961: 19; 1968: 208-9; Gamkrelidze and Ivanov 1995: 464; Starke 1995: 117-21; but see also Diakonoff 1972: 114), or, less likely, to a compound of Sanskrit aśvā- and the verbal root śam "to weary," "he who tires horses" (see Kammenhuber 1968: 209; Starke 1995: 117 n. 232). Thus, this word for horse might have been borrowed by Hurrians from a (proto-)Indic language toward the end of the third millennium (i.e., at least a millennium before the compositional date of the hymns of the Rgveda and the $G\bar{a}\theta\bar{a}s$ of the Avesta), and then was borrowed by Akkadian and other Semitic languages as part of the diffusion of the different techniques for the training of horses, in which Hurrians (such as Kikkuli) seem to have played a very important role.²²

^{19.} The sign APIN is already in the archaic texts from Uruk, both lexical and administrative, the so-called List of Professions included (Hruška 1985: 62–63), and also in Ebla (Butz 1985).

^{20.} Piotr Michalowski has pointed out to me that urudu has a good Semitic origin, as a feminine form of the same root of Akkadian werûm "copper." This feminine (*warūtum) was borrowed from a Semitic language other than Akkadian and it is reflected in the ED form a-ru₁₂-da (see PSD A/1: 161-62). Interestingly enough, the most common Semitic word for copper is feminine in Northwest Semitic languages: Heb. něḥûšāh/něhošet; Aram. nḥāšā; Phoe. nḥšt; Mand. nhaša. The root of werûm seems to be attested in other Afroasiatic branches, especially Chadic, in which it means "iron" (see Orel Stolbova 1995: 16 no. 55).

^{21.} When quoting Gamkrelidze and Ivanov, the reconstructed forms are cited according to the standard view of the Indo-European system of stops since Brugmann and Meillet, such as in Beekes (1995).

^{22.} A slightly different proposal can be found in Goetze (1962: 35). One should keep in mind that, already in the Sargonic period, we have sufficient attestations of the Hurrian language: the lions of the Hurrian foundation inscription of Tiš-atal, king (enda-n) of Urkiš; Hurrian toponyms in Sargonic Akkadian texts; and the recently discovered seals from Tell Mozan (Urkiš) mentioning diverse kings (enda-n) of Urkiš. All

The Sumerian etymologies proposed by Gamkrelidze and Ivanov (1995: 773) for some Indo-European words play a crucial role in their hypothesis on the Indo-European *Urheimat*. Since they have centered some recent discussions on linguistic paleontology, a close look at them may be useful:

a-gàr: IE *aĝ-ro- (Skt. árja-, Gr. agrós, Lat. ager; Pokorny 1959: 6). See Gamkrelidze and Ivanov (1995: 773), but see Diakonoff (1984: 47). In fact, both the root *aĝ- and the suffix *-ro are perfectly Indo-European.

gud, gu₄: IE *g*weh₃u- (Skt. gáu-, Att. Gr. boûs, Lat bōs; Pokorny 1959: 482; Beekes 1995: 35). Egyptian ng¾w "type of bull with long horns, as a sacrificial and harness animal" (Wb 2: 349; Hannig 1995: 439a) and gw "(wild) bull" (Wb 5: 159; Hannig 1995: 896b). See Gamkrelidze and Ivanov (1995: 491 "a Near Eastern migratory term of wide distribution," 773). However, Diakonoff (1984: 46) has denied this possibility. Pulleyblank (1966: 11) has argued that Chinese niú "cow, ox" would be an IE loanword (Modern Chinese niú < Middle Chinese ngjuw < Old Chinese *ngwji, see Baxter 1992: 779).

gigir "war chariot" shows the typical reduplication of the word for wheel (expressive or iconic word perhaps): Tocharian A kukäl B kokale "carriage," Skt. cakrá- "wheel, circle," Avest. čaxra- "wheel," Greek kúklos "circle," Old English hwēol, etc. (Pokorny 1959: 640); Georgian borbal and gorgal "circle, wheel," Heb. gilgāl, galgal, Aram. galga (Gamkrelidze and Ivanov 1995: 622; Cohen 1976: 2, 118; HALAT: 183) resemblance of IE *kwe-kwl-o-, Sum. gigir, Sem. *galgal - Kartvelian *grgar - and *brbar - (Gamkrelidze and Ivanov 1995: 639 n. 42; Trask 1996: 402-3). The fact that the IE root $k^w el$ "to turn" is well-attested in other IE words (Pokorny 1959: 639-40), does not preclude the possibility of having some sort of link between all these reduplicated forms. IE could have used an existing root with a connected mean-

this antedates the attestation of ^{anše}sí-sí in Ur III texts (see Parrot and Nougayrol 1948; Goetze 1962: 35 n. 11; Michalowski 1986; Buccellati and Kelly-Buccellati 1995/96).

ing that was also phonetically similar to the words for "wheel" in other languages, as was probably the case in Semitic—*galgal- is related to *gll "to be round, to roll": Akk. galālu, Syr. gallel, etc. (Cohen 1993: 3, 125–29; Orel and Stolbova 1995: 214 no. 948; 221 no. 980).

kur and Hit. *hekur* "top of cliff or mountain," Skt. *ágra*- "peak, top; upper edge; beginning," Av. *ayra*- "peak, top; beginning; first; upper," Latv. *agrs* "early" (IE **agro*- or **egro*-; Pokorny 1959: 8–9), see Gamkrelidze and Ivanov 1995: 573–74, 773. Militarëv (1995: 123) suggested an Afroasiatic etymology for kur, also unlikely.²³

tùr "pen, yard, cattle yard, enclosure for cattle" and IE *dhuer- "door" (Skt. dvára-, Gr. thúrā; Pokorny 1959: 278–79). Gamkrelidze and Ivanov (1995: 773) took this from Schott, but Diakonoff (1984: 47) has pointed out that an enclosure for cattle is just a very elementary innovation, so the borrowing is quite unlikely.

urudu: IE * $h_1 reud^h$ -, * $h_1 rud^h$ -ro-, * $h_1 roud^h$ o-(Beekes 1995: 143) or just * $reud^h$ -, without initial laryngeal (Pokorny 1959: 872–73), "red; red metal, copper" (Gamkrelidze and Ivanov 1995: 616–17, 773, 862)—admitted by Diakonoff (1984: 48), who points to a possible "pre-Sumerian" substratum. As seen above, urudu is probably a Semitic loanword from a feminine form (* $war\bar{u}tum$) of the root of Akkadian $wer\hat{u}m$ "copper."

In most cases (gud/gu₄, gigir, urudu, etc.), even if one accepts the relation between these Sumerian words and some Indo-European ones, the direction of the borrowing would be unclear. Are these words Indo-European loanwords in Sumerian, or Sumerian loanwords in early Indo-European? It is also possible that both Indo-European and Sumerian had borrowed these words from a third language—or even that these words are mere look-alikes. The criteria for the direction of borrowing are frequently quite difficult to estab-

^{23.} Militarëv (1995) wants to prove that the *Urheimat* of the Afroasiatic speakers was Asia and not Africa (but see Diakonoff 1981). Therefore, he needs to find traces of non-Semitic Afroasiatic in Asia. However, some of his alleged Afroasiatic loans in Sumerian are just *Wanderwörter* (most terms concern agriculture and fauna), and most are mere look-alikes.

lish (see Anttila 1989: 158–60), and the very small number of (rather uncertain if not unlikely) words in this list is not enough to prove an early contact between Sumerian speakers and Indo-Europeans.

In general, it has to be pointed out that the few Indo-European words that might be identified in Mesopotamia seem to be mostly Hittite words in Akkadian, such as perhaps talurgumannum (= eme-bal; see Lambert 1987: 410; Starke 1993) also Gelb 1968: 100-102; von Soden 1989: 351-57). In this case the only problem with the Hittite origin, that is the lack of a good Indo-European etymology for tarkummai-, tarkummiya- "to announce, interpret, translate" (see von Soden 1989: 355), may have been solved by Starke (1993). However, and in spite of Starke's proposal of an Indo-European etymology for the Hittite verb tarkummai-, tarkummiya-, the objection raised by Gelb (1968: 100) against a Semitic origin of ta/ urgumannum-that Akk. ragāmum "to shout, cry, call" does not provide a sound semantic linkmay be ruled out if one understands the function of the dragoman as mostly someone who reads

aloud and translates (cf. Hebrew $q\bar{a}r\bar{a}^{\circ}$, etc.; see *HALAT*: 1053), as was the case of the Targumic traditions.

The picture of the linguistic situation of Mesopotamia in early periods should be that of fluidity, of words traveling together with the objects and techniques they designate (Wanderwörter, Kulturwörter), of different languages and their dialects (most of which have left no traces or just a few, from toponyms to loanwords, in surviving languages), all of them sharing the same space and perhaps even sometimes the same speakers. Thus, there is no monolithic substratum that would have left, in a sort of primeval age, its vestiges in the Sumerian lexicon. All one can detect is a complex and fuzzy web of borrowings whose directions are frequently difficult to determine. Furthermore, and from a theoretical point of view, one should not overlook that the search for origins (Ursprache, Urheimat, etc.) is an intellectual construct of the past-frequently a misconstruction of it-and belongs to the realm of our concerns as scholars rather than to the world of events.

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