

On Proto-Semitic Deverbal Derivation*

Leonid Kogan - Russian State University for the Humanities, Moscow (Russia)

1. Introduction

The subject to be dealt with in the present contribution is closely connected with that of the paper presented during the first Barcelona Symposium on Comparative Semitics in November 2004. In this paper, now published as Kogan 2005, an attempt was made to outline the possibilities of reconstructing non-grammatical (or lexical) vocalism of Proto-Semitic. In spite of many difficulties, such a reconstruction was found both theoretically justified and practically achievable. The problem to be discussed below is considerably more ambiguous in its methodological premises and practical realization. It has been surprisingly rarely touched upon in scholarly literature and the two basic solutions known to me are almost diametrically opposite.

The first approach is embodied by Pelio Fronzaroli's pioneering studies of the sixties, notably his well-known article *Sull'elemento vocalico del lessema in semitico* (1963) as well as a series of contributions to PS lexical reconstruction (*Studi sul lessico comune semitico*, 1964-1972). As repeatedly emphasized in Kogan 2005, Fronzaroli's studies are of paramount importance for the vocalic reconstruction of primary nominal and verbal roots of Proto-Semitic. As for the derived nouns, their Proto-Semitic background does not seem to be explicitly discussed by Fronzaroli, although even a cursory look on the reconstructions proposed in *Studi* is sufficient to convince one that such a possibility was in fact envisaged by the author.

What follows is an alphabetically arranged list of reconstructed nominal derivatives which I was able to glean from Fronzaroli's articles. Reconstructions regarded by me as likely or possible (and, consequently, treated in more detail in the main part of the present contribution) are boldfaced, whereas those for some reasons considered unacceptable are briefly commented upon in notes:

ʔaḥir-* 'altro' (1963:124)¹, **baʔiš-*** 'fetido' (1972:629), ****bašil-*** 'pronto per l'uso alimentare (cibo)' (1972:636), **dahim-* 'scuro' (1965a:145)², **dawiy-* 'sofferente' (1964:39), ****dibḥ-*** 'sacrificio' (1965b:265), ****darḥ-*** 'seme' (1969:26), **gamil-* 'maturo' (1972:629)³, ****ḥamim-*** 'caldo', ****ḥumm-***

* My work on the present contribution was carried out in the framework of the project 06-04-00397a supported by RFH/PIHF. I am grateful to this foundation for its financial help. My gratitude goes to Dr. S. Loesov who carefully read a draft version of this article and provided valuable critical remarks.

1. No evidence beyond Hbr. *ʔaḥēr* (KB 35) whose structure, moreover, most probably implies gemination of **ḥ*.

2. The Arb. parallel adduced for Akk. *daʔmu* (fem. *daʔimtu*) is the Perfect *dahima* (also *dahama*) 'survenir à l'improviste et surprendre qn.' (BK 1 743), hardly acceptable semantically.

3. No evidence for this reconstruction.

‘calore’ (1965a:147), **hamiṣ-* ‘acido’ (1972:635), **ḥakk-at-* ‘scabbia’ (1964:41)⁴, **ḥalil-* ‘libero’ (1965b:262)⁵, **ḥarim-* ‘coperto; interdetto’ (1965b:262)⁶, **ḥamir-* ‘alterato, in quanto fermentato’ (1972:635)⁷, **ḥiṭṭ-* ‘errore’ (1965b:263), **kaṣiṭ-* ‘pieno di cibo’ (1972:630)⁸, **kaḍim-* ‘anteriore’⁹, **ḥudm-* ‘parte anteriore’ (1965b:265), **kaḍiṣ-* ‘santo’¹⁰, **ḥudš-* ‘santità, cosa sacra’ (1965b:262), **ḥarir-* ‘freddo (a.)’¹¹, **ḥurr-* ‘freddo (s.)’ (1965a:147), **ḥayṭ-* ‘vomito’ (1964:39)¹², **laban-* ‘bianco; latte’ (1963:124), **lamid-* ‘domestico, come sottomesso’ (1969:28)¹³, **mariṭ-* ‘grasso’ (1964:42)¹⁴, **mariṣ-* ‘malato, penoso’ (1964:38), **mawit-* ‘morto’, **mawt-* ‘morte’ (1964:38), **nugh-* ‘splendore’ (1965a:145)¹⁵, **nawir-* ‘luminoso’ (1965a:144)¹⁶, **nawim-* ‘addormentato leggermente’, **nawm-at-* (1964:38)¹⁷ ‘sonno leggero’, **rayib-* ‘affamato’ (1972:629)¹⁸, **raḥim-* ‘compassionevole’ (1964:47)¹⁹, **ṣapiw-* ‘limpido, in quanto filtrato’ (1972:635)²⁰, **ṣakir-* ‘ebbro’ (1972:632)²¹, **ṣalim-* ‘intatto’, **ṣalām-* ‘salute’ (1965b:263), **ṣamin-* ‘grasso’ (1964:42)²², **ṣabiṣ-* ‘sazio’ (1972:630), **ṣayib-* ‘canuto’²³, **ṣayb-*

4. Syr. *ḥekkātā* ‘scabies’ (Brock. 230) and Arb. *ḥikkat-* ‘fricatio; scabies’ (Fr. I 410) are not easily compatible with Akk. *ekketu* ‘scabies’ (CAD E 69, AHw. 195), more likely < **ḥakk-at-* than < **ḥikk-at-*.

5. No evidence for this reconstruction.

6. Based on the comparison between the base of the Perfect *ḥarima* ‘to be illicit’ in Arabic and the Akkadian adjective *armu* (*ḥarmu*) ‘enclosed’, which is not self-evident either semantically or phonologically. Moreover, the vowel of the second syllable of Akk. *armu* (*ḥarmu*) is apparently unknown (cf. CAD A₂ 292).

7. No evidence for this reconstruction. Terms for wine like Arb. *ḥamr-* or Hbr. *ḥāmār* on which it seems to be based do not exhibit any trace of an original bivocalic structure.

8. No evidence for this reconstruction.

9. No evidence for this reconstruction.

10. The evidence for this reconstruction is ambiguous. Akk. *kašdu*, fem. *kaḍiṣtu* is compared by Fronzaroli to Hbr. *ḳādēš* ‘he was sacred’ (in fact, *ḳādaš*, the *ē*-form being attested only in the plural in pausa: *ḳādēšū*). Needless to say, *ḳādēšū* is a verbal form rather than an adjective, whose normal form in Hebrew is *ḳādōš* (as for *ḳādēš* < **kaḍiṣ*, it means ‘male cultic prostitute’). Sure enough, neither Gez. *ḳaddus*, nor Arb. *ḳuddūs-*, nor Syr. *ḳaddīšā* (all adduced by Fronzaroli under this heading) can be said to support the reconstruction **kaḍiṣ-*.

11. No evidence for this reconstruction.

12. No evidence for this reconstruction: the Hebrew data (*ḳāḏṭ*, *ḳāḏṭ*) are contradictory and at any rate are not compatible with Arb. *ḳuyāṭ-* and Gez. *ḳayāṭ*. Akk. *qû* is not listed in modern dictionaries and the morphological structure behind this contracted form is fully uncertain.

13. No evidence for this reconstruction outside *lāmād* in post-Biblical Hebrew.

14. No evidence for this reconstruction outside Akk. *marû*, fem. *marītu*.

15. The meaning of Akk. *nūgu* ‘joy’ is too distant from that of Hbr. *nōgah* ‘shining’ to allow one to postulate a reliable PS reconstruction.

16. No reliable evidence behind this reconstruction: Akk. *nawru*, fem. *nawirtu* is compared to Arb. *nayyir-* which, it seems, may go back to both **nawir-* and **nawīr-* (Fleisch 1961:129). As for Hbr. *nēr* (likely < **nawir-*), it is a substantive rather than an adjective.

17. No evidence for the first reconstruction outside the Perfect *nāma – nimtu* in Arabic. As for the second one, the similarity between Arb. *nawmat-* and Syr. *nawmātā* is probably not sufficient for a reliable reconstruction even on the proto-Central Semitic level since Hbr. *nūmā* apparently reflects a different pattern.

18. The reconstruction is based on the comparison between the Perfect *rayiba* in Arabic and the adjective *raḳēb* in Hebrew.

19. Apparently no evidence outside the Perfect *raḥima* in Arabic.

20. No evidence for this reconstruction.

21. No evidence for this reconstruction outside Arb. *sakir-* ‘tout à fait ivre’ (BK 1 1114). The vowel of the second syllable of Akk. *ṣakru* seems to be unknown.

22. No evidence for this reconstruction outside Hbr. *šāmēn*.

23. As recognized by Fronzaroli (1964:50), the former reconstruction is based on Akk. *šibu* only.

at- ‘capelli canuti’ (1964:37), **tariy-* ‘irrigato’ (1969:24)²⁴, **tayn-(at-)* ‘urina’ (1964:39)²⁵, **talim-* ‘scuro’ (1965a:145), **tami?-* ‘assetato’ (1972:629), **dif-at-* ‘sudore’ (1964:39)²⁶, **wald-* ‘progenie’ (1964:37), **wašin-* ‘addormentato’, **šin-at-* ‘sonno’ (1964:38)²⁷.

In sum, no less than 25 among Fronzaroli’s reconstructions are acceptable. This impressive collection is not to be disregarded, and Semitists are greatly indebted to Prof. Fronzaroli for his pioneering efforts in this field of research. At the same time, there are reasons to believe that this collection is to be understood as the beginning rather than the end of our way to understand the nature of the Proto-Semitic nominal derivation. First of all, Fronzaroli provided virtually no theoretical or methodological support for his reconstructions of derived nouns (thus, in sharp contrast to the well-developed theoretical premises for reconstructing primary nominal and verbal roots, discussed in much detail throughout Fronzaroli’s studies and, in my opinion, fundamentally valid up to this day). What is a derived noun? What is the source of derivation? When did the derivation take place? Which kind of comparanda are acceptable for their reconstruction and which are not?²⁸ These and a few other fundamental questions are scarcely touched upon in Fronzaroli’s articles. In such a context, it is not surprising that almost 30 individual reconstructions proposed by Fronzaroli appear fully or partly unacceptable.

As far as I know, the problem of Proto-Semitic nominal derivation did not attract any serious attention until 1996 when J. T. Fox’s dissertation “Semitic Noun Patterns” became known to the specialists (published in book format in 2003). Fox’s approach to the problem is radically different from Fronzaroli’s. For Fox, a methodologically sound vocalic reconstruction presupposes a clear-cut distinction between primary (“isolated”) and derived nouns: in the former case, the original vocalism can be retrieved at least potentially; in the latter case, this is almost never possible. In Fox’s words, “the patterns of the derived nouns, as opposed to those of the isolated nouns, rarely match in enough languages for reconstruction. In other words, it is rare that we find a derived noun with a common reconstructed root, pattern, and meaning in several sufficiently distant Semitic languages. With the methodology presented here, then, these nouns cannot be reconstructed in their entirety to PS”²⁹.

At first sight, Fox’s conclusion may seem paradoxical. As he himself rightly observes, the pattern-and-root system is so typical of all classical Semitic languages that its fully developed presence on the Proto-Semitic level cannot be denied. Furthermore, “because many cognate roots are found in a variety of languages, they too may be reconstructed; and because many cognate patterns are found in widespread languages, also these may be reconstructed” (ibid. 53). Nevertheless, “the reconstructions do not fit together: root and pattern can rarely be reconstructed together in the same noun, and so entire derived nouns can rarely be reconstructed for PS” (ibid.). But *why*? Fox’s excellent monograph provides no answer to this question, although it is abundantly clear that his reluctance to reconstruct derived nouns for Proto-Semitic has more than one serious reason behind it.

In my opinion, such reasons can be roughly subdivided into morphological and phonological.

24. The reconstruction is based on the comparison between Akk. *šarû* (*šariu*) ‘rich’ and the Perfect *tariya* ‘to be rich’ in Arabic.

25. The evidence behind this reconstruction is uncertain, it is only Hbr. *šēn-ē-hām* that unambiguously points to **tayn-* (cf. SED I No. 77_v).

26. No evidence for this reconstruction outside Hbr. *zēlā*.

27. As pointed out in SED I No. 82_v, the nominal form is much more widely attested than the verbal root, therefore one cannot exclude that **šin-at-* is a primary noun and the verbal root is denominal.

28. This question is particularly acute, as the above analysis of Fronzaroli’s examples demonstrates. For example, what is the legitimate West Semitic comparandum for the Akkadian CaCfC- adjectives? The adjective? Or the Perfect? Or both?

29. Fox’s approach is shared by Huehnergard (2004:149), which does not prevent him from successfully tracing back to PS such common deverbal nouns as **dibh-*, **šimḡ-*, **tiḡl-*, **ḡurk-* and *murr-*.

The following obstacles of **morphological** nature deserve to be mentioned.

1. The inventories of patterns typical of particular Semitic languages are not identical. Each Semitic language tends to employ a relatively restricted number of patterns to express a few basic meanings, whereas other patterns are marginal or hardly attested. Adjectival patterns are those which are most heavily affected by this process. Thus, adjectives with a short vowel in the second syllable (*CaCVC-) are common in Akkadian and Hebrew (Huehnergard 2006:10), rare in Aramaic and Arabic and practically unattested in Ethiopian. And conversely, adjectives with a long \bar{i} in the second syllable are ubiquitous in Aramaic, Arabic and Ethiopian, relatively rare in Hebrew and practically absent from Akkadian. Substantives are also affected by this kind of specialization, although to a more limited extent. Thus, derived substantives with the patterns *CaCC- and *CaCaC- are widespread in West Semitic (notably, in Arabic) but almost absent from Akkadian, where *CuCC- and especially *CiCC- are common. Such objective restrictions drastically reduce the number of potentially comparable derived nouns.

2. As a corollary factor, a serious danger of a diametrically opposite nature emerges: when a certain pattern is known to be very widespread and productive in a given pair of languages, it becomes rather hard to tell whether we are dealing with a derivative inherited from the common ancestor of these languages or with independent developments having no value for the proto-language reconstruction. Thus, *CaCiC- adjectives being very common in both Akkadian and Hebrew, how can one be sure that, say, Akk. *šalmu*, fem. *šalimtu* and Hbr. *šālēm* ‘healthy, sound’ are to be traced to the common prototype **šalim-* rather than explained as unrelated derivations in each of the two languages?

3. It is not always easy to establish the way of derivation (deverbal nouns viz. denominal verbs). As convincingly demonstrated by Fox, denominal derivation using consonantal elements extracted from primary nominal roots (as illustrated by *bōkēr* ‘herdsman’ < *bākār* ‘cattle’ in Hebrew) was certainly a feature of Proto-Semitic. Accordingly, some denominal verbs may have been produced already at this early stage. The pertinent nominal forms are then to be treated as primary rather than derived. A typical controversial example of this kind is **taʕm-* ‘taste’, treated as a PS derived noun in Fronzaroli 1971:607 but listed among primary (isolated) nouns in Fox 2003:77³⁰.

4. Finally, dialectal variety within a given language may be an obstacle for a proper evaluation of the forms under comparison. Thus, a few adjectives have different vocalic patterns in the Assyrian and Babylonian dialects of Akkadian: Ass. *maṣiṣ-* vs. Bab. *maṣuṣ-* ‘sick’, *naṣib-* vs. Bab. *naṣub-* ‘moist’, Ass. *raḳ-* vs. Bab. *riḳ-* ‘empty’, Ass. *šsabis-* vs. Bab. *šsabus-* ‘angry’ (Kogan 2006:207-8). The origin of this variation is obscure, as are its implications for the comparison between these forms and their Semitic cognates.

Distinction between various proto-patterns can be obscured by regular or semi-regular **phonological** processes in particular languages which seriously hamper the reconstruction of concrete derived nouns on the Proto-Semitic level.

A paradigmatic example of this category can be found in Ethiopian Semitic. Due to the regular phonological merger of PS **u* and **i* into ə in these languages, a considerable number of proto-patterns became fully or partly indistinguishable. Furthermore, since the phonological difference between ə and \emptyset in Ethiopian has been seriously weakened (for the purpose of the present investigation, practically non-existent), a few additional pattern oppositions have been lost.

Merger of original **ḳatl-* and **ḳitl-* is typical of Hebrew. In principle, the distinction between these morphological structures should be preserved in this language (**ḳatl-* > *ḳāṭāl*, *ḳaṭl-o*; **ḳitl-* > *ḳāṭāl*, *ḳiṭl-ō*), but in fact PS **ḳitl-* often shifts to *ḳāṭāl*. The original vowel is thought to reappear when the syllable

30. In my opinion, the relatively wide spread of the verbal root and the rather abstract meaning of the noun *speak* in favor of Fronzaroli’s approach, but no certainty in this and similar cases seems to be possible.

becomes closed (Fox 2003:115), but sometimes even this is not the case (cf. Arb. *riḏl-* ‘foot’ vs. Hbr. *rāḡāl*, suff. *raḡl-o*). Furthermore, precisely in this position the reverse process can often be observed, namely PS **ḡatl-* shifting to *ḡiṭl-* (Hbr. *bāṭān*, suff. *biṭn-o* ‘belly’ vs. Arb. *baṭn-*). These processes represent a very serious obstacle as they affect a language which is both very rich from the lexical point of view and otherwise very conservative as far as the preservation of the PS vocalism is concerned.

Vocalic syncope in Akkadian may not look a critical obstacle since the original vowel is normally restored in certain morphological positions. However, for many relatively rare lexemes such positions are not attested. Furthermore, it is not always the original vowel that is restored (note, for example, Akk. *karšu* ‘belly’, st. constr. *karaš* in spite of the fairly reliable PS prototype **kariš-*, Fox 2003:166).

Which of the two approaches to the problem – Fronzaroli’s or Fox’s – is to be preferred? The answer depends, as so often in comparative Semitics, on the quantity and the quality of relevant examples. As we have seen above, Fronzaroli’s positive approach is exemplified by a high number of convincing examples, but quite a few among his reconstructions do not appear well-founded. Fox’s negative conclusion derives from very reasonable theoretical arguments but concrete examples in their support can rarely be found on the pages of his dissertation.

In such a context, a comprehensive and systematic analysis of all evidence potentially pertinent to the problem of the Proto-Semitic deverbal derivation was thought to be of paramount importance. To draw the readers’ attention to this evidence is the main purpose of the present contribution. The data adduced below derive from a systematic perusal of the standard lexicographic tools for Akkadian, Hebrew, Syriac and Geez, subsequently confronted to each other as well as to the Classical Arabic data. With rare exceptions, Modern South Arabian evidence has not been taken into consideration in view of the well-known difficulties of the diachronic analysis of the MSA vocalism.

For each pattern, a chronological stratification has been attempted, mostly in agreement with R. Hetzron’s widely accepted pattern of classification (e. g., Hetzron 1974). A hypothetic common derivate is considered Proto-Semitic when it is present in Akkadian and at least in one West Semitic language (only bilateral Akkadian-Aramaic examples have not been included because of the high danger of borrowing or influence). Proto-West Semitic examples are those reflected in both Central and Ethiopian Semitic (here again, bilateral Ethiopian-Arabic comparisons have been generally avoided)³¹. Finally, Central Semitic examples are those attested in Hebrew, Arabic and possibly Aramaic (bilateral Hebrew-Aramaic and Aramaic-Arabic examples have been excluded). In each section, examples are listed in the alphabetic sequence of the PS reconstructions.

2. Possible deverbal derivates: comprehensive evidence

2.1. C₁aC₂C₃-

2.1.1. PS:

Akk. *zēru*, OA *zarḡu* (CAD Z 89, AHw. 1521; Oakk. on), Hbr. *zāraś* (KB 282), JBA *zarśā* (Sok. B 421), Syr. *zarśā* (Brock. 207), Arb. *zarś-* (Fr. II 233), Tgr. *zārəʔ* (LH 496), Tna. *zārʔi* (K Tna 1975) ‘seed’ > PS **darś-*.

In spite of a number of phonological irregularities (*z* instead of the expected *d* and *d* in Arabic and Aramaic respectively, *ʔ* instead of *ś* in Ethiopian), the morphological structure of the PS reconstruction

31. Due to phonological factors outlined above as well as to the very high degree of pattern systematization in Ethiopian, evidence coming from this branch is rarely decisive. As a result, the proto-West Semitic stratum is rather poorly represented.

seems relatively certain.

Akk. *erebu*, *erbu* ‘setting of sun’ (CAD E 258, AHw. 233; OB on), Hbr. *šārāb* ‘sunset, evening’ (KB 878), Arb. *ḡarb-* ‘coucher du soleil; le couchant, l’ouest’ (BK 2 450) > PS **ḡarb-*, **šarb-*.

The Akkadian term is almost exclusively attested in the combination *ereb šamši* ‘sunset’ where the quantity of *e* in the second syllable cannot be ascertained. However, a short *e* is clearly implicit in *mātam ištu šītīša ana er-bi-ša* ‘the country from East to West’ in an OB letter from Mari (hardly a WS usage). Therefore, both CAD and AHw. are correct to distinguish between the substantive *er(e)bu* and the infinitive *erēbum*.

Akk. *ḡabru* (CAD Q 17, AHw. 888; OB on), Hbr. *ḡābār* (KB 1064), JBA *ḡabrā* (Sok. B 982), Syr. *ḡabrā* (Brock. 644), Arb. *ḡabr-* (BK 2 658), Tgr. *ḡābār* (LH 249), Tna. *ḡābri* (K Tna 978) ‘grave’ > PS **ḡabr-*.

Akk. *mūtu* (CAD M₂ 316; OA, OB on), Hbr. *māwāt* (KB 563), JBA *mōtā* (Sok. B 651), Syr. *mawtā* (Brock. 378), Arb. *mawt-* (BK 2 1165), Gez. *mot* (LGz. 375), Tgr. *mot* (LH 135), Tna. *mot* (K Tna. 473) ‘death’ > PS **mawt-*.

Akk. *paršu* ‘rite, ritual; divine authority, power, office; authoritative decision, command, decree’ (CAD P 195, AHw. 835; OAkk. on), Arb. *farḡ-* ‘précepte, loi, disposition de la loi, d’obligation divine prescrite positivement par le Coran; loi, code’ (BK 2 574) > PS **parḡ-*.

As a possible source of this admittedly adventurous reconstruction one could suggest the verbal root **prḡ* ‘to break through, to cut, to split’ (v. concrete forms in LGz. 167), with a well-known semantic shift from ‘to break, to cut’ > ‘to decide, to order’. Arb. *frḡ* combines both meanings (BK 2 573) and cf. further KB 1844 under Biblical Aramaic *ḡazērā*.

Akk. *tēmu* ‘Planungsfähigkeit, Verstand, Anweisung’ (AHw. 1385), Hbr. *tašam* ‘taste’ (KB 377), JBA *tašāmā* ‘taste’ (Sok. B 510), Syr. *tašmā* ‘gustus’ (Brock. 283), Arb. *tašm-* ‘goût, saveur; appétit’ (BK 2 84), Gez. *tašm* ‘taste, flavour’ (LGz. 583) > PS **tašm-*.

For the verbal root **tšm* ‘to taste’, presumably lost in Akkadian but well attested almost throughout WS, v. LGz. 583.

2.1.2. PWS:

Hbr. *raḡab* ‘broad space, expanse’ (KB 1212), Arb. *raḡb-* ‘ampleur’ (BK 1 835), Gez. *rāḡb* ‘breadth’ (LGz. 466) > PWS **raḡb-*.

Hbr. *šālaḡ* ‘limping, stumbling’ (BDB 854), Arb. *ḡalḡ-* ‘clochement’ (BK 2 138), Gez. *šalḡ* ‘abscess, wound, ulcer, sore’ (LGz. 554), Tgr. *šālāḡ* ‘wound’ (LH 633) > PWS **ḡalḡ-*.

For the PWS verbal root **tllḡ* ‘to limp, to be lame’ v. SED I No. 78.

Hbr. *yālād* ‘boy’ (KB 412), Syr. *yaldā* (pl.) ‘liberi’ (Brock. 301), Arb. *wald-* ‘né, procréé, enfanté’ (BK 2 1602), Gez. *wald* ‘son, child, boy’ (LGz. 613), Tgr. *wālād-* ‘son, young man’ (LH 430) > PWS **wald-*.

A different pattern **walad-* is reflected in Arb. *walad-* ‘enfant, petit (d’homme ou d’animal)’ (BK 2 1602), Gez. *walatt* < **walad-t* ‘daughter, girl’ (LGz. 613), Tgr. *wālāt* < **walad-t* id. (LH 431).

2.1.3. PCS:

Ugr. *ab-du* (DUL 138), Hbr. *šābād* (KB 774), JBA *šabdā* (Sok. B 839), Syr. *šabdā* (Brock. 504), Arb. *šabd-* (BK 2 150) ‘servant, slave’ > PCS **šabd-* (Huehnergard 2005:190).

Hbr. *ḡāmād* ‘loveliness, beauty’ (KB 325), Arb. *ḡamd-* ‘éloge, louange; bonté, clémence’ (BK 1 488) > PCS **ḡamd-*.

Hbr. *lāḡām* ‘bread’ (KB 526), JBA *laḡmā* ‘food, bread’ (Sok. B 622-3), Syr. *laḡmā* ‘panis’ (Brock.

364), Arb. *lahm-* ‘viande, chair’ (BK 2 978) > PCS **lahm-*.

Hbr. *māgād* ‘excellence (of gifts of nature)’ (BDB 550), Jud. *magdā* ‘precious ware, fine fruit’ (Ja. 726)³², Syr. *magdā* ‘fructus’ (Brock. 373), Arb. *mažd-* ‘gloire, illustration’ (BK 2 1064) > PCS **magd-*.

Hbr. *rākāb* ‘group of chariots, war-chariot troop’ (KB 1233), Arb. *rakb-* ‘troupe de cavaliers de dix et au delà montés sur des chevaux ou sur des chameaux; caravane, cavalcade, cortège’ (BK 1 913) > PCS **rakb-*.

Hbr. *šēb* ‘greyheadness; old age’, *šēbāb* ‘the grey hair; advanced age’ (KB 1318), JPA *šybh*, det. *šybth* ‘old age, grey hair’ (Sok. 571), Syr. *saybātā* (pl.) ‘crines albi’ (Brock. 469), Arb. *šayb-* ‘canitie, cheveux blancs’ (BK 1 1294) > PCS **šayb(-at)-*.

Gez. *šibat* ‘grey hair’ (LGz. 539) and related Ethiopian forms reflect **šib-at-* whereas the background of Akk. *šibtu* ‘grey hair’ (CAD Š₂ 386, AHw. 1228; Mari, SB) cannot be established with certainty.

2.2. C₁iC₂C₃-

2.2.1. PS:

Akk. *zību* ‘food-offering’ (CAD Z 105, AHw. 1525; OB on), Hbr. *zābah*, with suff. *zibh-ī* ‘communal sacrifice’ (KB 262), JBA *dibhā* ‘sacrifice’ (Sok. B 277), Syr. *debhā* ‘sacrificium, victima’ (Brock. 138), Arb. *dibh-* ‘victime que l’on égorge’ (BK 1 763), Gez. *zabh* ‘sacrifice’ (LGz. 631) > PS **dibh-* (Huehnergard 2004:149).

Ugr. *da-ab-ḥu* ‘sacrifice, offering’ (DUL 262) may suggest that the pattern underlying Hbr. *zābah* is to be reconstructed with *a* rather than *i*.

Akk. *zikru* ‘discourse, utterance; mention; name, fame’ (CAD Z 112, AHw. 1526; OAkk. on), Hbr. *zēkār* ‘mention’ (KB 271), Arb. *ḏikr-* ‘réminiscence, souvenir; mention’ (BK 1 776), Gez. *zəkr* ‘record, memorial, mention’ (LGz. 636), Tna. *zəkrī* ‘recollection, memory, remembrance’ (K Tna 2006) > **ḏikr-* (Blau 1961:81).

Akk. *ḥišbu* ‘abundant yield, produce’ (CAD Ḥ 202, AHw. 348; OB on), Arb. *ḥiṣb-* ‘fertilité, abondance des produits de la terre’ (BK 1 580) > PS **ḥiṣb-*.

Akk. *ḥītu* ‘fault, harm; act of negligence; damage; sin, crime’ (CAD Ḥ 210, AHw. 350; OB on), Hbr. *ḥēṭ(?)* ‘offence, guilt’ (KB 306), JBA *ḥiṭ?ā* ‘sin’ (Sok. B 448), Arb. *ḥiṭ?-* ‘erreurr; faute commise volontairement’ (BK 1 591) > PS **ḥiṭ?-*.

Akk. *kišru* ‘knot; contingent of soldiers; joint of the human or animal body’ (CAD K 436, AHw. 488; OAkk. on), JBA *kiṭrā* ‘knot, node’ (Sok. B 1012), Syr. *keṭrā* ‘vinculum, nodus, articulus’ (Brock. 662), Gez. *k^wəṣr* ‘band, knot’ (LGz. 450) > PS **kiṭr-*.

Akk. *libšu* ‘garment, clothing’ (CAD L 181, AHw. 551; OB), Arb. *libs-* ‘vêtement, habits’ (BK 2 959), Gez. *ləbs* ‘clothes, garment, apparel’ (LGz. 305), Tgr. *ləbəs* ‘large garment’ (LH 38), Tna. *ləbsi* ‘dress, garment’ (K Tna 97) > PS **libš-*.

Akk. *mīlu* ‘seasonal flooding of the rivers’³³ (CAD M₂ 69, AHw. 652; OB on), Arb. *mil?* ‘ce qui remplit une mesure’ (BK 2 1142), Gez. *məl?* ‘fullness, that which fills’ (LGz. 342), Tgr. *mələ?* ‘fulness’ (LH 108) > PS **mil?*.

32. Also *migdā* (ibid.), only *migdā* in JBA (Sok. B 663).

33. A number of expressions unconnected with flooding (like *mīl irti* ‘pride’, *mīl libbi* ‘high spirits’) are attested, which justifies von Soden’s translation ‘Hochwasser; Fülle’.

Akk. *mišlu* ‘half; midpoint, center, middle’ (CAD M₂ 126, AHw. 661; OA, OB on), Arb. *miṭl-* ‘resemblance, image de...’ (BK 2 1061), Gez. *məsl* ‘likeness, similarity, form, figure, image, parable, proverb’ (LGz. 365), Tna. *məsli* ‘resemblance, image’ (K Tna 384) > PS **miṭl-*.

Akk. *niklu* ‘ingenuity; trick, deception’ (CAD N₂ 231, AHw. 789; SB, NA, NB)³⁴, Hbr. **nēkāl* (in *nikl-ē-hām*) ‘deceitfulness’ (KB 699), JBA *niklā* ‘deceit’ (Sok. B 751), Syr. *neklā* ‘dolus, fraud’ (Brock. 429) > PS **nikl-*.

Akk. *niḫru* ‘split wood or reed’ (CAD N₂ 252, AHw. 792; OB), Jud. *niḫrā* ‘cleft’ (Ja. 935), Syr. *nekrā* ‘fragmentum’ (Brock. 448), Arb. *niḫr-* ‘creux qui traverse le noyau de la datte dans sa longueur’ (BK 2 1323) > PS **niḫr-*.

Akk. *piṭru* ‘fissure, split; undoing; separation’ (CAD P 449, AHw. 871; OB on), Arb. *fiṭr-* ‘rupture du jeûné (BK 2 611) > PS **piṭr-*.

Akk. *sikru* ‘dam, weir; seclusion, cloistering’ (CAD S 259, AHw. 1043; OB on), Arb. *sikr-* ‘digue; endiguement’ (BK 1 1113) > PS **sikr-*.

Akk. *širpu* ‘red dyed wool (or fabric); colored spot’ (CAD Š 208, AHw. 1092; OB on), Arb. *širf-* ‘espèce de couleur rouge avec laquelle on teint les courroies des chaussures’ (BK 1 1333) > PS **širp-*.

Akk. *šiklu* ‘shekel (a measure of weight)’ (CAD Š₃ 96, AHw. 1248; Oakk. on), Hbr. *šāḳāl*, pl. constr. *šiklē* ‘weight, weightiness, a specific weight, a shekel’ (KB 1643), JBA *tiḳlā* ‘weight, shekel’ (Sok. B 1206), Syr. *teklā* ‘onus’ (Brock. 831), Arb. *tiḳl-* ‘fardeau, charge, tout ce qui est pesant; poids’ (BK 1 230) > PS **tiḳl-* (Huehnergard 2004:12),

Akk. *wildu* ‘offspring, progeny’ (CAD I 71, AHw. 1496; OB on), Arb. *wild-* ‘né, procréé, enfanté’ (BK 2 1602) > PS **wild-*.

2.2.2. PWS:

Hbr. *ḥērām* ‘ban, what is banned’ (KB 354), JBA *ḥirmā* ‘ban’ (Sok. B 459), Syr. *ḥermā* ‘interdictio, detestatio’ (Brock. 257), Arb. *ḥirm-* ‘action défendue, illicite’ (BK 1 414), Gez. *ḥərm* ‘forbidden thing’ (LGz. 242), Tna. *ḥərmi* ‘illicit, forbidden or prohibited thing’ (K Tna 185) > PWS **ḥirm-*.

Hbr. *kāpāl*, du. *kipl-ayim* ‘doubling; the double’ (KB 493), JPA *kyplh* ‘double’ (Sok. 266), Arb. *kifl-* ‘le double; part, portion, lot’ (BK 2 916), Gez. *kafl* ‘part, portion, share, lot’ (LGz. 276), Tna. *kafli* ‘portion, share, part’ (K Tna 1691), Amh. *kaḫāl* ‘part, room’ (K 1460) > PWS **kipl-*.

Hbr. *sētār* ‘covering, protection, secrecy’ (KB 772), JBA *sitrā* ‘secrecy’ (Sok. B 1033), Syr. *setrā* ‘secretum’ (Brock. 502), Arb. *sitr-* ‘voile, rideau; abri, protection’ (BK 1 1049), Tgr. *səṭər* ‘the hiding’ (LH 186), Tna. *sətri* ‘mystery’ (K Tna 712), Sel. *səṭər* ‘hidden place’ (LGur. 566) > PWS **sitr-*.

Hbr. *šēmaḥ* ‘report, news’ (KB 1575), Jud. *šimšā* ‘report, fame’ (Ja. 1599), Syr. *šemšā* ‘auditus, fama’ (Brock. 786), Arb. *simḥ-* ‘audition, réputation, bon nom’ (BK 1 1140), Gez. *səməḥ* ‘rumor, news, testimony’ (LGz. 501) > PWS **šimḥ-* (Huehnergard 2004:149).

2.2.3. PCS:

Hbr. *ḥēbār* ‘the one of the two opposing sides; side, edge; bank’ (KB 781), JBA *ḥibrā* ‘side, bank’ (Sok. B 851), Syr. *ḥibrā* ‘transitus, ripa ulterior’ (Brock. 508), Arb. *ḥibr-* ‘rive, bord, rivage’ (BK 2 153) > PCS **ḥibr-*.

Hbr. *ḥēpāš* ‘joy, delight; wish; matter, business’ (KB 340), Arb. *ḥifḍ-* ‘attention, vigilance; soin’ (BK 1 460) > PCS **ḥipt-*.

34. Better attested is *nikiltu* ‘ingenuity, skillful work; trick, cunning, deception’ (CAD N₂ 220, AHw. 788).

Hbr. *šēpāl* ‘lowliness, humiliation’ (KB 1632), Syr. *šēplā* ‘humiliatio’ (Brock. 795), Arb. *sifl-* ‘abaissement, humilité’ (BK 1 1102) > PCS **šipl-*.

2.3. C₁iC₂C₃-at-

2.3.1. PWS:

Hbr. *qinʔā* ‘zeal’ (KB 1110), Jud. *qinʔātā* ‘jealousy, envy, passion’ (Ja. 1388), Syr. *kene(ʔ)tā* ‘studium’ (Brock. 675), Gez. *qənʔat* ‘jealousy’ (LGz. 433)³⁵, Tgr. *qənʔat* ‘jealousy, envy’ (LH 252), Har. *qiñat* ‘envy’ (LHar. 127) > PWS **qinʔ-at-*.

2.4. C₁uC₂C₃-

2.4.1. PS:

Akk. *uklu* ‘Verpflegung’, *ukultu* ‘Verpflegung, Lebensmittel, Kost’ (AHw. 1406; OA, OB on), Hbr. *ʔōkāl*, *ʔoklā* ‘food, nourishment’ (KB 47), JBA *ʔuklā* ‘food’ (Sok. B 88), Syr. *ʔuklā* ‘cibus’ (Brock. 17), Arb. *ʔukl-* ‘tout ce qui se mange: aliment, nourriture’, *ʔuklat-* ‘morceau, bouchée’ (BK 1 43), Gez. *ʔəkl* ‘food, bread, corn, fodder’ (LGz. 15, with references to other Eth.) > PS **ʔukl-*, **ʔukl-at-*.

Akk. *urku* ‘Länge’ (AHw. 1431; Oakk., OA, NA), Hbr. *ʔōrāk* ‘length’ (KB 88), JBA *ʔurkā* id. (Sok. B 96), Syr. *ʔurkā* ‘longitudo’ (Brock. 49) > PS **ʔurk-*. (Huehnergard 2004:149).

Akk. *buʔšu*, *būšu* ‘stench’ (CAD B 352, AHw. 143; SB), Hbr. *bəʔōš* ‘stench’ (KB 107), Arb. *buʔs-* ‘malheur, adversité’ (BK 1 79) > PS **buʔš-*.

Akk. *kuḍmu* ‘early times, early existence; front (in prepositional use)’ (CAD Q 295, AHw. 926; OB on), Hbr. pB. *qōdām* ‘before’ (Ja. 1324), Syr. *kuḍmā* ‘pars primaria; ante, coram’ (Brock. 647), Arb. *kuḍm-* ‘le devant, la première ligne’, *kuḍma*ⁿ ‘devant’ (BK 2 690), Gez. *qədm* ‘beginning, front, start, precedence’, *qədma* ‘before, in front’ (LGz. 421), Tna. *qədmī* ‘front, front part; before, prior to’ (K Tna. 1035) > PS **kuḍm-*.

Akk. *mutku* ‘sweetness’ (CAD M₂ 302, AHw. 688; SB), Hbr. *mōtāk* id. (KB 656) > PS **mutk-*.

Akk. *šuplu* ‘depth’ (CAD Š₃ 324, AHw. 1280; OB on), Syr. *šuplā* ‘humilitas’ (Brock. 795), Arb. *sufł-* ‘abaissement, humilité’, *sufł-iyy-* ‘bas, inférieur’ (BK 1 1102) > PS **šupl-*.

Akk. *šulmu* ‘black spot, blackness’ (CAD Š 240, AHw. 1110; OA, OB on), Arb. *ḡulm-* ‘obscurité, ténébres’ (BK 2 140), Tgr. *šəlam* ‘blackness, darkness’ (LH 632), Tna. *šəlmī* ‘blackness’ (K Tna 2542) > PS **ḡulm-*.

2.4.2. PWS:

Hbr. *ṭohar* ‘clearness; purifying’ (KB 370), Arb. *ṭuhr-* ‘état de pureté d’une femme’ (BK 1 114), Gez. *ṭəhr* ‘purity, chastity’ (LGz. 589) > PWS **ṭuhr-*.

2.4.3. PCS:

Hbr. *šōmäk* ‘depth’ (KB 849), JBA *šumkā* ‘depth’ (Sok. B 847), Syr. *šumkā* ‘profunditas, altitudo’ (Brock. 531), Arb. *šumk-* ‘profondeur (d’un puits etc.)’ (BK 2 369) > PCS **šumk-*³⁶.

Hbr. *šōnäg* ‘pleasure’ (KB 851), Arb. *yunž-* ‘agaceries, oeillades, minauderies’ (BK 2 510) > PCS **yung-*.

35. The variant *qənʔat* is qualified as rare in LLA 445.

36. This is one of the very few common derivatives admitted as reconstructible by Fox (2003:62).

Hbr. *ḥōdāš* ‘new moon’ (KB 294), Arb. *ḥudt-* ‘tout événement nouveau, récent’ (BK 1 390) > PCS **ḥudt-*.

Hbr. *ḥōsār* ‘want’ (KB 338), Arb. *ḥusr-* ‘perte, dommage qu’on éprouve’ (BK 1 571) > PCS **ḥusr-*.

Hbr. *ḳōdāš* ‘something holy’ (KB 1076), JBA *ḳudšā* ‘holiness’ (Sok. B 989), Syr. *ḳudšā* ‘sacrum sanctitas’ (Brock. 649), Arb. *ḳuds-* ‘pureté, sainteté’ (BK 2 687) > PCS **ḳudš-*.

Gez. *ḳwəds* ‘sanctuary, Jerusalem’ (LGz. 423) must be borrowed from Arabic as suggested by Leslau.

Hbr. *nōšam* ‘kindness’ (KB 706), Arb. *nušm-* ‘vie menée dans l’abondance et les plaisirs; prospérité, bonheur; plaisir’ (BK 2 1298) > PCS **nu šm-*.

Hbr. *yōšār* ‘straightness, honesty’ (KB 450), Arb. *yusr-* ‘facilité de caractère, douceur’ (BK 2 1628) > PCS **yušr-*.

2.5. C₁uC₂C₃-at-

2.5.1. PWS:

Hbr. *ḳorḥā* ‘bald patch’ (KB 1141), JPA *ḳwrḥh*, det. *ḳwrḥth* ‘baldness’ (Sok. 484), Syr. *ḳurḥōtā* ‘calvitium’ (Brock. 694), Arb. *ḳurḥat-* ‘petite tache blanche au front d’un cheval’ (BK 2 707), Gez. *ḳwərḥat* ‘clipping, shaving, tonsure’ (LGz. 441) > PWS **ḳurḥat-*.

2.5.2. PCS:

Hbr. *šobšā* ‘satiating’ (KB 1304), Arb. *šubšat-* ‘ce qui suffit pour rassasier qn. en une seule fois, morceau suffisant’ (BK 1 1185) > PCS **šub šat-*.

2.6. C₁aC₂aC₃-

2.6.1. PS:

Akk. *ḳatnu*, fem. *ḳatantu* ‘thin, fine, narrow’ (CAD Q 173, AHw. 908; Oakk. on), Hbr. *ḳāṭān* ‘small’ (KB 1092) > PS **ḳaṭan-*.

Akk. *wāḳru*, fem. *wāḳartu* ‘rare, in short supply, scarce’ (CAD A₂ 207, AHw. 1461; Oakk. on), Hbr. *yāḳār* ‘scarce, precious, valuable’ (KB 432) > PS **wāḳar-*.

Akk. *išaru* ‘normal, regular, straight’ (CAD I 224, 392; Oakk. on), Hbr. *yāšār* ‘straight; level, smooth; proper, right’ (KB 450) > PS **yašar-*.

2.6.2a. PWS (substantives):

Hbr. *rāšāb* ‘hunger’ (KB 1257), Arb. *rayab-* ‘désir, penchant irrésistible pour quelque chose’ (BK 1 887), Gez. *raḥab* ‘hunger, famine’ (LGz. 468), Tgr. *rāḥab* ‘hunger’ (LH 147), Tna. *rāḥab* id. (K Tna. 544), Amh. *rab* id. (K 392), Har. *raḥab* id. (LHar 134) > PWS **rayab-*.

2.6.2b. PWS (adjectives):

Ugr. *la-ba-nu* ‘white’ (DUL 490), Pho. *labon* (in the plant name *abiblabon*, Friedrich-Röllig-Guzzo 1999:40), Hbr. *lābān* ‘white’ (KB 517), Arb. *laban-* ‘lait, lait aigre’ (BK 2 962), Mhr. *əwbōn* ‘white’ (JM 251), Hrs. *əlbōn* id. (JH 83), Jib. *lūn* id. (JJ 159), Soq. *lībēhon* id. (LS 228) > PWS **laban-*.

As pointed out in Bulakh 2004:270, the semantic shift from ‘white’ to ‘milk’ in Arabic is likely.

Reconstruction of the proto-MSA adjective ‘white’ as **laban-* appears justified (for Soq. *líbehon* < **laban-* cf., e. g., *díqehon* ‘beard’ < **daqan-*), yet not entirely certain.

2.6.3a. PCS (substantives):

Hbr. *šāmāl* ‘trouble, labour, toil’, JBA *šamlā* ‘work, income’ (Sok. B 870), Syr. *šamlā* ‘labor, fructus laboris’ (Brock. 530), Arb. *šamal-* ‘ouvrage, travail, occupation’ (BK 2 370) > PCS **šamal-*³⁷.

Hbr. *māšāl* ‘saying, proverb’ (KB 648), JBA *matlā* ‘parable’ (Sok. B 721), Syr. *matlā* ‘simile, parabola’ (Brock. 409), Arb. *maṭal-* ‘semblable à un autre, pareil, pair; ressemblance, image, similitude; allégorie, parabole, proverbe’ (BK 2 1061) > PCS **maṭal-*.

Tgr. *māsāl* ‘proverb, parable’ (LH 118) is likely an Arabism.

Hbr. *yāḡāš* ‘product of labour’ (KB 386), Arb. *waḡaš* ‘douleur, mal qu’on éprouve’ (BK 2 1492) > PCS **waḡaš-*.

Hbr. *yārāk* ‘greens, vegetables’ (KB 440), JBA *yarḳā* ‘vegetables’ (Sok. B 543), Syr. *yarḳā* ‘olera’ (Brock. 309), Arb. *warak-* ‘feuilles, feuillage (d’arbre)’ (BK 2 1522) > PCS **warak-*.

2.6.3b. PCS (adjectives):

Hbr. *ḥādāš* ‘new, fresh’ (KB 294), JBA *ḥadat*, det. *ḥadtā* ‘new’ (Sok. B 433), Syr. *ḥattā* ‘novus’ (Brock. 217), Arb. *ḥadaṭ-* ‘jeune homme; nouveau, jeune’ (BK 1 390) > PCS **ḥadaṭ-*³⁸.

Akk. *eššu* does not yield any decisive evidence about the thematic vowel: as is well known, the usual feminine form of this adjective is *eššetū*. The very few *e*-DI-IŠ-*tu(m)* forms listed in CAD E 374, AHw. 258, 1555 can perhaps be read as *e-de-eš₁₅-tu(m)*, cf. Fox 2003:170.

Hbr. *ḥākām* ‘skilful; clever, experienced; wise’ (KB 314)³⁹, Arb. *ḥakam-* ‘juge, arbitre; viellard’ (BK 1 471) > PCS **ḥakam-*.

2.7. C₁aC₂aC₃-at-

2.7.1. PWS:

Hbr. *bərākā* ‘blessing’ (KB 161), Arb. *barakat-* ‘bénédictio de Dieu; félicité, bonheur’ (BK 2 117), Gez. *barakat* ‘blessing, benediction’ (LGz. 105) > PWS **barak-at-*.

A chain of culturally determined borrowings cannot be excluded. In Aramaic the original word-structure has been altered, cf. JPA *bärkətā* (Sok. 114), Syr. *burkətā* (Brock. 96).

2.7.2. PCS:

Hbr. *nəšāmā* ‘movement of air; breath, breath of life; living being’ (KB 730), Syr. *nəšamtā* ‘spiritus, anima’ (Brock. 451), Arb. *nasam-* ‘léger souffle du vent; souffle de la vie, esprits vitaux; homme, genre humain’, *nasamat-* ‘respiration; souffle de la vie; asthme’ (BK 2 1253) > PCS **našam(-at)-*.

37. For this comparison cf. Fox 2003:160, 164.

38. For this comparison cf. Fox 2003:164, 170. It is uncertain whether *-e-* in the st. abs. *ḥdet* in Syriac indeed points to an original **i* as one may infer from Fox 2003:170 (*-e-* is by far the most frequent epenthetic vowel for all original **CṾC(Ṿ)C-* patterns in Syriac, Nöldeke 1904:63). Admittedly, Fox lists Syr. *ḥattā* under both **C₁aC₂aC₃-* and **C₁aC₂iC₃-*.

39. For early precedents v. *ḥa-ka-[ma-]am*, *ḥa-[k]a-mu-um* in OB Mari (ARM 14 3:15, Durand 2006:28), in my opinion, almost certainly West Semitisms (cf. Streck 2000:90-1).

2.8. C₁aC₂iC₃-

2.8.1. PS:

Akk. *bīšu* ‘malodorous; of bad quality; evil’ (CAD B 270, AHw. 131; Boghazköy, SB, NB, LB), JBA *bīš*, det. *bīšā* ‘bad, evil, foul’ (Sok. B 206), Arb. *baʿiṣ*- ‘accablé de malheurs, misérable’ (BK 1 80) > PS **ba ʾiṣ*-.

Akk. *bašlu*, fem. *bašiltu* ‘ripe, mature (fruit and animals); cooked, prepared, boiled’ (CAD B 140, AHw. 111; MB on), Hbr. *bāšēl* ‘boiled’ (KB 164), Jud. *bašlā* ‘boiled’ (Ja. 199)⁴⁰ > PS **bašil*-.

Akk. *emšu*, fem. *emištu* ‘sour’ (CAD E 152, AHw. 215; OB on), Hbr. *ḥāmēš* ‘leavened’ (KB 329) > PS **ḥamīš*-.

Akk. *kabtu*, fem. *kabittu* ‘heavy’ (CAD K 24, AHw. 418; OA, OB on), Hbr. *kābēd* id. (KB 456) > PS **kabid*-⁴¹.

Akk. (Ass.)⁴² *maršu*, fem. *marīštu* ‘sick, diseased; difficult, inaccessible, severe’ (CAD M₁ 291; OA on), Jud. *məraʿ* ‘sick, suffering’ (Ja. 845), Syr. *marʿā* ‘aegrotus, debilis’ (Brock. 405), Arb. *marīq*- ‘malade’ (BK 2 1091) > PS **mariš*-.

Akk. *malû*, fem. *malītu* (CAD M₁ 173, AHw. 596; Oakk. on), Hbr. *mālā* (?) (KB 584), Jud. *mālī*, det. *malyā* (Ja. 789), Syr. *māle*(?) (Brock. 388), Arb. *mali?*- (BK 2 1143) ‘full’ > PS **mali?*-.

Akk. *mītu*, Ass. *mētu* (CAD M₂ 140, AHw. 663; Oakk. on), Hbr. *mēt* (KB 562), Syr. *mēt* (Brock. 378), Arb. *mayyit*- (BK 2 1166) ‘dead’ > PS **mawit*-.

Akk. *šalmu*, fem. *šalimtu* ‘healthy, sound’ (CAD Š₁ 256, AHw. 1149; OA, OB on), Hbr. *šālēm* ‘intact, complete’ (KB 1538), JBA *šālēm* ‘complete’ (Sok. B 1150), Syr. *šəlem*, det. *šalmā* ‘sanus, integer’ (Brock. 782) > PS **šalim*-.

Akk. *šaplu*, fem. *šapiltu* ‘low, lower, nether; lowly person’ (CAD Š₁ 468, AHw. 1174; Oakk. on), Hbr. *šāpēl* ‘low’ (KB 1632), Syr. *šəpēl* ‘humiliatus, humilis’ (Brock. 795), Arb. *safil*- ‘vil, bas, ignoble’ (BK 1 1102) > PS **šapil*-.

Akk. *šebû*, fem. *šebītu* ‘sated’ (CAD Š₂ 251; OB on)⁴³, Hbr. *šābēaʿ* ‘satiated, satisfied’ (KB 1304), Syr. *sabʿā* ‘satiatus’ (Brock. 456) > PCS **šabiš*-.

Akk. *šalmu* ‘black (as a natural color); dark (as a morbid or otherwise abnormal discoloration)’ (CAD Š 77, AHw. 1078; Oakk. on), Arb. *ḍalim*- ‘sombre, obscur’ (BK 2 141) > PS **ṭalim*-.

Akk. *šamû*, fem. *šamītu* (CAD Š 95, AHw. 1081; OB on), Hbr. *šāmā*(?) (KB 1032), Arb. *ḍami?*- (BK 2 142) ‘thirsty’ > PS **ṭami?*-.

40. Scarcely attested, likely a Hebraism.

41. This is one of the very few PS derivatives admitted in Fox 2003 (e. g., “an adjective such as **kabid* ‘heavy’, which exists in a number of Semitic languages and so is reconstructed for PS” on p. 61 of that study). As far as I can see, languages presumably preserving this hypothetic PS adjective are Akkadian and Hebrew only. However, there are some reasons to suppose that what Fox actually means is the substantive **kabid*- ‘liver’ (note that Hbr. *kābēd* is translated as ‘heavy, liver’ on p. 43 of Fox’s study whereas **kabid*- ‘liver’ is missing from the list of isolated nouns on pp. 72-87). In my opinion, this automatic identification of the well-reconstructible and virtually pan-Semitic substantive **kabid*- ‘liver’ with the rather poorly attested adjective **kabid*- ‘heavy’ is methodologically unwarranted.

42. In Bab. *maruštu*.

43. Interpreted as *šebû*, *šebītu* in AHw. 1207.

2.8.2. PCS:

Hbr. *ʔāšēm* ‘guilty’ (KB 96), Arb. *ʔaʔim-* ‘criminel, coupable’ (BK 2 12) > PCS **ʔaʔim-*.

Hbr. *ʕāmēl* ‘burdened with grief; workman, worker’ (KB 845), Arb. *ʕamil-* ‘qui travaille, qui fait un ouvrage’ (BK 2 371) > PCS **ʕamil-*.

Hbr. *dāwā* ‘faint, sick’ (KB 216), Arb. *dawi* ‘malade’ (BK 1 756) > PCS **dawiy-*.

Hbr. *ḥārēb* ‘waste, desolate’ (KB 349), Arb. *ḥarib-* ‘dépeuplé, dévasté, ruiné’ (BK 1 552) > PCS **ḥarib-*.

Hbr. *yāḡēaʕ* ‘weary, striving, troubled’ (KB 386), Arb. *waǰīʕ-* ‘qui éprouve une douleur, des douleurs’ (BK 2 1492) > PCS **wagiʕ-*.

Hbr. *yāšēn* ‘asleep’ (KB 448), Arb. *wasin-* ‘qui est profondément endormi’ (BK 2 1539) > PCS **wašin-*.

Hbr. *yābēš* ‘dried, dry’ (KB 384), Arb. *yabis-* ‘qui a séché, devenu sec’ (BK 2 1622) > PCS **yabiš-*.

2.9. C₁aC₂iC₃-at-

2.9.1. PS:

Akk. *šapiltu* ‘lower or inner part (of objects, parts of the body)’ (CAD Š₁ 451, AHw. 1172; OA, OB n), Hbr. *šəpēlā* ‘the low country on the western edge of the hills of Judaea’ (KB 1633), Arb. *safilat-* ‘pieds (ne se dit qu’en parlant de chameau)’ (BK 1 1102) > PS **šapil-at-*.

2.10. C₁aC₂uC₃-

2.10.1. PS:

Akk. *ḡerbu*, fem. *ḡerubtu* ‘near, close, at hand’ (CAD Q 214, AHw. 914; OA, OB on), Hbr. *ḡārōb* ‘nearby, close’ (KB 1139) > PS **ḡarub-*.

Akk. *matḡu*, fem. *matuḡtu* ‘sweet’ (CAD M₁ 413, AHw. 633; OAkk. on), Hbr. *mātōḡ* id. (KB 656) > PS **matuḡ-*.

Akk. *raḡbu*, fem. *raḡubtu* ‘moist, fresh, live’ (CAD R 218, AHw. 963; OB on), Hbr. *rāḡōb* ‘in sap’ (KB 1223) > PS **raḡub-*.

Akk. *warḡu*, fem. *waruḡtu* ‘yellow, green’ (CAD A₂ 300, AHw. 1470; OA, OB on), Hbr. *yārōḡ* ‘greenery’ (KB 437), pB. ‘light-colored, yellow or greenish’ (Ja. 595) > PS **waruḡ-*.

2.11. C₁aC₂C₂-

2.11.1. PS:

Akk. *daḡḡu* ‘small (child); small’ (CAD D 107, AHw. 163; OAkk. on), Hbr. *daḡ* ‘scarce, fine, small’ (KB 229), JBA *daḡḡā* ‘pupil’ (Sok. B 348), Gez. *daḡḡ* ‘little ones, children, sons’ (LGz. 140), Tna. *dāḡḡi* ‘children’ (K Tna 2102) > PS **daḡḡ-*.

Akk. *eddu* ‘pointed’ (CAD E 23, AHw. 185; OB on), Hbr. *ḡad* ‘sharp’ (KB 291) > PS **ḡadd-*.

Akk. *emmu* ‘hot’ (CAD E 150, AHw. 214; OB on), Hbr. *ḡām*, pl. *ḡamm-īm* ‘hot’ (KB 325) > PS **ḡamm-*.

Akk. *ḡallu* ‘light; of low standing; small, few, young’ (CAD Q 62, AHw. 894; OB), Hbr. *ḡal* ‘light, nimble, rapid’ (KB 1100) > PS **ḡall-*.

Akk. *marru* ‘bitter’ (CAD M₁ 286, AHw. 612; OB Mari on), Hbr. *mar* id. (KB 629) > PS **marr-*.

Akk. *raḫḫu* ‘thin, light, flat’ (CAD R 171, AHw. 958; OA, OB on), Hbr. *raḫ* ‘thin, gaunt’ (KB 1286), Arb. *raḫḫ-* ‘mince, fin’ (BK 1 903) > PS **raḫḫ-*.

Akk. *sarru* ‘mock, false; criminal, fraudulent’ (CAD S 180, 1030; OAkk. on), Hbr. *sar* ‘ill-humoured’ (KB 768) > PS **sarr-*.

2.11.2. PCS:

Hbr. *bar* ‘pure’ (KB 153), Arb. *barr-* ‘bienfaisant; libéral, généreux; vrai; pieux’ (BK 1 103) > PCS **barr-*.

2.12. C₁aC₂C₂-at-

2.12.1. PS:

Akk. *sartu*, pl. *sarrātu* ‘lie, falsehood, treachery; fraud, misdeed, criminal act’ (CAD S 186, AHw. 769; OB on), Hbr. *sārā* ‘obstinacy; falsehood’ (KB 769) > PS **sarr-at-*.

Akk. *šallatu* ‘plunder, booty, captives; capture, captivity, plundering’ (CAD Š₁ 248, AHw. 1148; OAkk. on), Arb. *sallat-* ‘vol, larcin, soustraction faite sans bruit’ (BK 1 1117) > PS **šall-at-*.

2.13. C₁iC₂C₂-at-

2.13.1. PS:

Akk. *gizzatu* ‘yield of wool or hair’ (CAD G 116, AHw. 295; NB), *gizzu* ‘shearing, shearings’ (ibid.; OB), Hbr. *gēz* ‘fleece’ (KB 185), *gizzā* ‘fleece, wool’ (ibid. 186), Jud. *gizzā*, *gizzōtā* ‘fleece’ (Ja. 237), Syr. *gezzā* ‘tonsura’, *gezzōtā* ‘vellus’ (Brock. 111), Arb. *ḡizzat-* ‘tonte, laine provenant d’une tonte’ (BK 1 286) > PS **gizz-at-*, **gizz-*.

Akk. *kippatu* ‘loop, hoop, tendril; circle, circumstance of a circle; circumference’ (CAD K 397, AHw. 481; OB on), Hbr. pB. *kippā* ‘arch, doorway, bow; skull-cap’ (Ja. 635), Syr. *keppōtā* ‘fornix, arcus’ (Brock. 339), Arb. *kiffat-* ‘tout objet rond; rond en bois d’un tambour de basque; cavité, orbite; filet (de chasseur)’ (BK 2 910) > PS **kipp-at-*.

Akk. *middatu* ‘measure (of capacity, time); measuring rod’ (CAD M₂ 46, AHw. 650; OB on), Hbr. *middā* ‘measured length, measurement’ (KB 547), Jud. *middōtā* ‘dimension, measure’ (Ja. 733) > PS **midd-at-*.

A different pattern in Arb. *muddat-* ‘longueur, étendue’ (BK 2 1076) from which Tgr. *mōddāt* ‘space of time, period’ (LH 141) is likely borrowed.

2.14. C₁uC₂C₂-

2.14.1. PS:

Akk. *ummu* ‘Hitze; Fieber’ (AHw. 1417; OB on), Hbr. *ḥōm* ‘warmth’ (KB 325), JBA *ḥummā* ‘heat’ (Sok. B 439), Syr. *ḥummā* ‘calor, aestus’ (Brock. 238), Arb. *ḥumm-* ‘chaleur brûlante, excessive’ (BK 1 486) > PS **ḥumm-*.

2.14.2. PWS:

Hbr. *ḫōr* ‘cold’ (KB 1128), JBA *ḫurrā* ‘cold, frost’ (Sok. B 1002), Syr. *ḫurrā* (Brock. 689), Arb. *ḫurr-* ‘froid, fraîcheur’ (BK 2 700), Gez. *ḫʿərr* ‘cold, coldness’ (LGz. 443), Tna. *ḫʿərr* id. (K Tna 929) > PWS **ḫurr-*.

2.14.3. PCS:

Hbr. *ḥōl* ‘profane’ (KB 315), JBA *ḥullā* ‘weekday, unconsecrated food’ (Sok. B 438), Syr. *ḥullā* ‘profanum’ (Brock. 231), Arb. *ḥull-* ‘état habituel de la vie, opposé à *ʔiḥrām-*’ (BK 1 473) > PCS **ḥull-*.

Hbr. *rōb* ‘quantity, wealth’ (KB 1174), Jud. *rubbā* ‘multitude, larger portion, majority’ (Ja. 1455), Arb. *rubba-a* ‘souvent, il arrive souvent que...’ (BK 1 799) > PCS **rubb-*.

2.15. C₁uC₂C₂-at-

2.15.1. PWS:

Hbr. *mōrā* ‘bitterness’ (KB 633), Arb. *murrat-* ‘amertume’ (BK 2 1084), Gez. *mərrat* ‘bitterness’ (LGz. 360), Tna. *mərrāt* id. (K Tna 362) > PWS **murr-at-* (Huehnergard 2004:149).

Note Akk. *murru* ‘bitter taste’ (CAD M₂ 222, AHw. 676; SB) with no fem. marker.

2.16. C₁ūC₃-at-

2.16.1. PS:

Akk. *būštu* ‘embarrassment’ (CAD B 351, AHw. 143; OA, OB on), Hbr. *būšā* ‘shame’ (KB 117), *bōšāt* id. (ibid. 165) > PS **būt-at-*.

2.17. C₁āC₃-

2.17.1. PS:

Akk. *ṭābu* ‘schön, gut’ (AHw. 1378; OAkk. on), Hbr. *ṭōb* ‘good’ (KB 370), Biblical Aramaic *ṭ□b* (ibid. 1882, with references to other Arm.) > PS **ṭāb-*.

2.18. C₁aC₂īC₃-

2.18.1. PS:

Akk. *asīru* ‘prisoner of war, captive foreigner used as worker’ (CAD A₂ 331, AHw. 74; OB on), Hbr. *ʔāsīr* ‘prisoner’ (KB 73), Arb. *ʔasīr-* ‘prisonnier de guerre, captif’ (BK 1 32) > PS **ʔasīr-*.

Gemination in Syr. *ʔassīrā* ‘captivus’ (Brock. 37) may be due to a secondary accommodation to the pattern C₁aC₂C₂īC₃-, extremely common in Aramaic.

Akk. *dalīlu* ‘praise, fame, glory’ (CAD D 50, AHw. 154; OB on), Arb. *dalīl-* ‘indice, signe; preuve, argument’ (BK 1 721) > PS **dalīl-*.

2.18.2. PCS:

Hbr. *nāʔīm* ‘pleasant, lovely, delightful; happiness’ (KB 705), Arb. *naʔīm-* ‘qui jouit de la prospérité, d’une vie de délices’ (BK 2 1299) > PCS **naʔīm-*.

Hbr. *pātīl* ‘thread’ (KB 990), Arb. *fātīl-* ‘corde mince faite des fibres du palmier’ (BK 2 538) > PCS **pātīl-*.

Hbr. *šāʔīr* ‘the smaller one, the younger one, little’ (KB 1041), Syr. *šəʔīrā* ‘contemptus, turpis’ (Brock. 634), Arb. *šayīr-* ‘petit, chétif’ (BK 1 1342) > PCS **šayīr-*.

Hbr. *yādīd* ‘beloved’ (KB 390), Arb. *wadīd-* ‘ami, amant, amoureux’ (BK 2 1506) > PCS **wadīd-*.

Note Syr. *yaddīdā* ‘amatus’ (Brock. 296), with gemination possibly due to adaptation to the

widespread $C_1aC_2C_2\bar{C}_3$ - pattern of adjectives.

Hbr. *yāḥīd* ‘only, lonely, deserted’ (KB 406), JPA *yḥyd* ‘only, unusual’ (Sok. 238), Syr. *yīḥīdā* ‘unicus, solus’ (Brock. 300), Arb. *waḥīd* ‘unique, séparé des autres’ (BK 2 1493) > PCS **waḥīd*-.

Hbr. *yālīd* ‘son’, *yəlīd bayit* ‘slave born in the house(hold)’ (KB 413), Arb. *walīd* ‘né; enfant; esclave né à la maison’ (BK 2 1603) > PCS **walīd*-.

2.19. $C_1aC_2\bar{a}C_3$ -

2.19.1. PS:

Akk. *šālāmu* ‘health, well-being; welfare of a country, a city’ (CAD Š₁ 206; in AHW. 1143 mostly unseparated from the infinitive), Hbr. *šālōm* ‘prosperity, success; intactness; welfare, state of health’ (KB 1508), JBA *šālām*, det. *šəlāmā* ‘peace, well-being’ (Sok. B 1151), Syr. *šālāmā* ‘pax, prosperitas, valetudo’ (Brock. 782), Arb. *salām* ‘paix; état de celui qui est sain et sauf; sécurité; bon état, état de santé’ (BK 1 1131), Gez. *salām* ‘peace, salutation, safety’ (LGz. 499) > PS **šālām*-.

Neo-Ethiopian forms listed in LGur. 543 may be borrowed from Arabic.

2.20. $C_1aC_2\bar{a}C_3-at$ -

2.20.1. PCS:

Hbr. *mərōrā* ‘gall-bladder, poison’ (KB 639), Syr. *mərārətā* ‘fel’ (Brock. 400), Arb. *marārat* ‘vésicule qui contient le fiel’ (BK 2 1084) > PCS **marār-at*-.

2.21. $C_1iC_2\bar{a}C_3$ -

2.21.1. PS:

Akk. *ibāru* ‘a mark of discoloration on the skin’ (CAD I 1, AHW. 363; SB), Arb. *ḥibār* ‘marque, signe, trace de qch.’ (BK 1 366) > PS **ḥibār*-.

2.21.2. PCS:

Hbr. *məlā(?)* ‘that which fills’ (KB 584), Jud. *məlā(?)* ‘fulness’ (Ja. 787), Syr. *məlā?ā* ‘plenitudo’ (Brock. 388), Arb. *milā?* ‘quantité nécessaire pour remplir qch.’ (BK 2 1142) > PCS **milā?*-.

Note Tna. *məla* ‘fullness, wholeness, entirety’ (K Tna 330).

2.22. $C_1iC_2\bar{a}C_3-at$ -

2.22.1. PCS:

Hbr. *ḡāgōrā* ‘payment’ (KB 10), Arb. *ḡiḡārat* ‘récompense; salaire; prix de louage; gages d’un domestique’ (BK 1 13) > PCS **ḡiḡār-at*-.

Hbr. *ḡābōdā* ‘work, service, service of worship’ (KB 776), Arb. *ḡibādat* ‘servitude, esclavage; obéissance; religion, culte’ (BK 2 151) > PCS **ḡibād-at*-.

Hbr. *bəšōrā* ‘tidings’ (KB 164), Arb. *bišārat* ‘nouvelle vraie, bonne ou mauvaise’ (BK 1 129) > PCS **bišār-at*-.

A culturally-determined adaptation of the Arb. root *bšr* to the Hebrew nominal pattern cannot be excluded, although it is noteworthy that no similar formation seems to be present in Aramaic (where the root as such is scarcely attested).

2.23. C₁uC₂āC₃-
2.23.1a. PS (substantives):

Akk. *suʔālu* ‘phlegm; cough with phlegm’ (CAD S 340, AHw. 1052; MB, SB), Syr. *šəʕalā* ‘tussis’ (Brock. 793), Arb. *suʕāl-* ‘toux’ (BK 1 1093), Tna. *səʕal* ‘tosse’ (Bassano 201)⁴⁴ > PS **šusāl-*.

Gez. *saʕāl* (LGz. 481), Tgr. *səʕal* id. (LH 194) and Tna. *səʕal* id. (K Tna 761) may ultimately go back to the same pattern with **u* > *a* before ʕ.

2.23.1b. PS (adjectives):

Akk. *duḫāku* ‘very small’ (CAD D 190, AHw. 177; lexical lists), Arb. *duḫāk-* ‘menu, fin, subtil, mince’ (BK 1 715) > PS **duḫāk-*.

Akk. *ṣuḫāru* ‘male child, adolescent’ (CAD Ṣ 231, AHw. 1109; OA, OB on), Arb. *ṣuyār-* ‘petit, chétif’ (BK 1 1342) > PS **ṣuyār-*.

2.23.2. PWS:

Syr. *ʕəʕāšā*, *ʕūtāšā* ‘sternutamentum’ (Brock. 521), Arb. *ʕuʕās-* ‘éternument’ (BK 2 285), Gez. *ʕəʕās* ‘sneezing’ (LGz. 77) > PWS **ʕuʕāš-*.

2.24. C₁uC₂ūC₃-
2.24.1. PS:

Akk. *ḫubūru* ‘din’ (CAD Ḫ 220, AHw. 352; SB), Arb. *ḫubūr-* ‘joie, accès de gaieté’ (BK 1 366) > PS **ḫubūr-*.

Akk. *lubūšu* ‘clothing, wardrobe’ (CAD L 236, AHw. 561; OA, OB on), Hbr. *ləbūš* ‘garment’ (KB 516), JBA *ləbūšā* ‘garment, husk’ (Sok. B 616), Syr. *ləbūšā* ‘vestis’ (Brock. 358) > PS **lubūš-*.

Arb. *ləbūs-* ‘vêtement, habits’ (BK 2 960) reflects a different pattern. It is tempting to suppose that Arb. *lubūs-*, attested as a broken plural of *libs-* (BK 2 959), is an adaptation of **lubūš-* as an early collective (as apparently envisaged in KB 516).

Akk. *rukūbu* ‘vehicle (boat, chariot); conveyance, riding’ (CAD R 409, AHw. 994; OB on), Hbr. *rəkūb* ‘vehicle, chariot’ (KB 1236)⁴⁵, Hbr. pB. ‘coach, chariot’ (Ja. 1479), Jud. *rəkūbā* id. (ibid.), Syr. *rəkūbā* ‘animal ad equitandum; currus, vehiculum; equitatio’ (Brock. 730), Arb. *rukūb-* (attested as the masdar of *rkb* ‘monter (une monture), chevaucher’, BK 1 912) > PS **rukūb-*.

2.25. C₁uC₂ūC₃-at-
2.25.1. PCS:

Hbr. *gəbūrā* ‘strength’ (KB 172), JPA *gəbūrā*, det. *gbwrth* ‘might, mighty action’ (Sok. 119), Arb. *ḡubūrat-* ‘orgueil’ (BK 1 248) > PCS **gubūr-at-*.

2.26. C₁aC₂C₂āC₃-

44. Only *səʕal* in K Tna 761.

45. The only example attested in the Bible (*rəkūb-ō* in Ps 104.3) is of course not diagnostic as far as the nature of the vowel in the first syllable is concerned.

2.26.1. PCS:

Hbr. *gibbōr* ‘manly, vigorous; hero’ (KB 172), JBA *gibbārā* ‘strong, important’ (Sok. B 277), Syr. *gabbārā* ‘vir fortis, heros; fortis’ (Brock. 103), Arb. *ǧabbār-* ‘fort, grand et robuste; puissant; homme violent, tyran’ (BK 1 248) > PCS **gabbār-*⁴⁶.

2.27. C₁awC₂aC₃-**2.27.1. PS:**

Akk. *kušartu* ‘repair’ (CAD K 598, AHw. 1570, CDA 170; MB on)⁴⁷, Ugr. *ku-šar-ru* [*kōtaru*] ‘first element of the name of the god of magic and technology’ (DUL 472), Pho. *chousōr* [*kūsōr*], *chousarthis* [*kūsar-t*] (Friedrich-Röllig-Guzzo 1999:135), Hbr. *kōšārōt* ‘prosperity, happiness’ (KB 467), JPA *kwšr* ‘propriety’ (Sok. 254), JBA *kušrā* ‘vigor’ (Sok. B 567), Syr. *kušrā* ‘habilitas, sollertia’ (Brock. 350), Arb. *kawtar-* ‘the abundance’ (Ambros 2004:236) > PS **kawtar(-at)-*.

2.29. C₁iC₂C₁iC₂-**2.29.1. PCS:**

Hbr. *šāʔāšāʔīm* ‘offspring, descendant’ (KB 993), Arb. *ḏiʔḏiʔ-* ‘racine, source; nombreuse postérité, grand nombre d’enfants’ (BK 2 1) > PCS **ḏiʔiʔ-*.

Note Gez. *ḥāʔḥāʔ* ‘shoots’ (LGz. 147; also ‘abortion’, ‘costs, expenses’), with a different vocalism.

3. Evaluation of the evidence

The nature of the evidence presented above is such that all kinds of conclusions will be of necessity tentative and preliminary. Patterns of derived nouns reconstructible to PS are relatively few in number and all of them (with some remarkable exceptions) are to a certain degree preserved in all or most of Semitic. Accordingly, agreement in root and pattern for a given derived noun between two or more Semitic languages can always be discarded as accidental. As common sense nevertheless suggests, this can hardly be the case for each of almost 140 examples accumulated above. This admittedly impressionistic claim can be supported by two types of arguments.

1. Geographic spread. In some cases, we are faced with patterns that are more or less trivial for all or most languages under consideration, but the agreement in form and meaning is so widely attested that it is rather hard to assume that each language opted for this particular pattern independently. Thus, *C₁iC₂C₃- substantives are relatively common in most Semitic languages (Fox 2003:141-55), but this circumstance is hardly sufficient to justify such a virtually unanimous agreement as that between Akk. *zikru*, Hbr. *zēkār*, Arb. *ḏikr-* and Gez. *zəkr* (**ḏikr-*). Similarly, C₁aC₂āC₃- is well attested as a pattern of abstract nouns and infinitives but a merely accidental agreement between Akk. *šalāmu*, Hbr. *šālōm*, JBA

46. This reconstruction is not unanimously accepted, cf. Huehnergard 1992:222.

47. A nominalization *kūšartu* is preferable in view of the comparative data. Better attested (since OB) and semantically more fitting is *kušīru* ‘success, profit’ (CAD K 599, AHw. 516) but the underlying pattern is not easily comparable with that reconstructed here.

šālāmā, Arb. *salām-* and Gez. *salām* (**šālām-*) is hard to conceive⁴⁸. I am aware that in a few cases the spread might have been conditioned (or at least facilitated) by cultural influence. This may be well be the case of Akk. *ḫīṭu*, Hbr. *ḫē(ʔ)*, JBA *ḫīṭā*, Arb. *ḫīṭ-* (> PS **ḫīṭ-*), whose ideologically important meaning ‘sin, crime’ was suitable for borrowing or influence. However, many of the relevant examples have no obvious cultural connotations, restricting the possibility of borrowing to a reasonable minimum.

2. Preservation of rare and non-productive patterns. In many cases, there is an agreement in meaning and pattern between two or more Semitic languages in spite of the fact that in some of them the pattern in question is rare and non-productive. In such cases, independent formations are very unlikely. Rather, one has to suppose that such derived nouns are inherited in their entirety from an older, pre-historic stage of the development of the language in question, a stage shared by it with other languages of the Semitic family.

Perhaps the most striking example of this type is represented by the relatively numerous $C_1aC_2C_3$ -nouns in Akkadian. As is well known, the unproductive nature of this pattern is a hallmark of this language in comparison to West Semitic. Accordingly, such nominal lexemes as *zarʔu*, *erbu*, *ḫabru*, *ṭēmu* or *paršu* are more likely to be inherited from PS than produced within Akkadian. Unless considered primary (which may be the case of *zarʔu* or *ṭēmu* but rather unlikely in the remaining cases), such nouns must belong to a rather early stock of Proto-Semitic deverbal derivatives.

As far as West Semitic is concerned, * $CaC\check{V}C$ - adjectives in Aramaic and Arabic deserve special attention. As already mentioned above, such adjectives are rare and unproductive in these languages⁴⁹. They are not entirely missing, however, and when they are attested, their structure is very often identical to that of their etymological counterparts in Hebrew and Akkadian: Hbr. *ḫādāš*, JBA *ḫādat*, Arb. *ḫadaṭ-* (> **ḫadaṭ-*), Hbr. *ḫākām*, Arb. *ḫakam-* (> **ḫakam-*), Akk. *šalmu*, fem. *šalimtu*, Hbr. *šālēm*, JBA *šālēm* (> **šalim-*), Akk. *šaplu*, fem. *šapiltu*, Hbr. *šāpēl*, Syr. *šāpel*, Arb. *saḫil-* (> **šāpil-*) etc. It lies at hand to suppose that such adjectives are not internal Aramaic or Arabic derivations but go back to a relatively early stage of PS⁵⁰.

A few patterns with vocalic length are worth mentioning in the present context. Thus, the use of the $C_1uC_2āC_3$ - pattern to designate diseases is relatively well attested throughout West Semitic (Fox 2003:229), so that Syr. *šāʔālā*, Arb. *suʔāl-* and Tna. *səʔal* ‘cough’ are potentially explainable as independent formations. However, no such function is known for $C_1uC_2āC_3$ - in Akkadian where *suʔālu* ‘cough’ is nevertheless attested since Middle Babylonian⁵¹. Similarly, the often postulated diminutive

48. This is duly acknowledged by a scholar otherwise reluctant to reconstruct derived nominal lexemes for PS: “an unusual case is **šālām-* ‘well-being’, found in Akkadian, Arabic, Aramaic, Geʿez and Hebrew. Only rarely do non-isolated nouns show such consistency among the languages. The noun cannot be isolated, because the verb from the root is also reconstructible on the basis of comparative evidence” (Fox 2003:179-80).

49. “The function of the *qatql* patiens adjectives is obscured throughout much of West Semitic, where they have largely been replaced by **qatīl* and *qatīl* patiens adjectives” (Fox 2003:123). In the table on p. 125, Fox qualifies Arb. **qatal* as “rare”, Arb. **qatīl* as “common”, Syr. **qatal* and **qatīl* as “very rare”. These qualifications look convincing although it is not clear on what kind of statistic evidence they are based.

50. Note that Hbr. *ḫādāš*, Syr. *ḫattā* and Arb. *ḫadaṭ-* are said to be “cognates” in Fox 2003:164 in spite of Fox’s general reluctance to reconstruct derived adjectives. The same is true of the homonymous substantival pattern: on the same page of his study, Fox compares as cognates Hbr. *ʔāmāl* ‘trouble, labour, toil’, Syr. *ʔamlā* and Arb. *ʔamal-*.

51. Fox (2003:230) explains this form as a loanword (presumably, West Semitic) but this is rather hard to prove: *s* instead of the expected *š* is by no means unique in Akkadian (v., e. g., SED I LXXII-LXXIII) whereas the word is well attested in a variety of medical and other texts.

function of $C_1uC_2\bar{a}C_3$ - is not productive either in Akkadian or in Arabic⁵², which makes rather remarkable such pairs as Akk. *duḫāḫū* and Arb. *duḫāḫ*- ‘small’ or Akk. *ṣuḫāru* ‘child’ and Arb. *ṣuḫār*- ‘small’. Finally, given the fact that the $C_1uC_2\bar{u}C_3$ - pattern is certainly rare and unproductive in all Semitic languages except Arabic, it is tempting to suppose that such pairs as Akk. *ḫubūru* ‘din’ and Arb. *ḫubūr*- ‘joy’⁵³ or Akk. *lubūšu* and Hbr. *ləbūš* ‘garment’ represent something more than merely accidental coincidences.

Finally, a most peculiar case is that of Akk. *asīru* ‘prisoner of war, captive foreigner used as worker’. This term, attested since Old Babylonian, is inseparable from Hbr. *ʔāsīr* and Arb. *ʔasīr*- with the same meaning. However, $C_1aC_2\bar{r}C_3$ - adjectives are extremely rare or even non-existent in Akkadian (Fox 2003:187-8, Huehnergard 2006:10). Moreover, this form shows no trace of the *e*-coloring typical of its hypothetical source-verb *esēru*. No ready explanation for this strange example is at hand, yet three possibilities suggest themselves. Similarly to the Akkadian $C_1aC_2C_3$ - substantives discussed above, it may be a fossilized deverbal adjective inherited from PS. If accepted, this explanation would obviously contradict the widespread (and not implausible) assumption according to which $C_1aC_2\bar{r}C_3$ - adjectives were not lost in Akkadian but rather represent a West Semitic innovation (Huehnergard 2006:10, Fox 2003:123). An early West Semitic borrowing suggested in CAD A₂ 332 cannot be ruled out but is rather hard to prove: *asīru* is not uncommon in OB sources (for a most recent survey v. Stol 2004:790-1), whereas an unquestionable West Semitism in the core OB Akkadian is a rarity at best. Finally, one could tentatively postulate a short *i* in this word, not liable to the vocalic syncope because of the following *r* (for a number of such examples v. Fox 2003:166). This suggestion does not explain why the *e*-coloring did not take place, whereas a total lack of syncopated by-forms (as in *labiru/labru* ‘old’) is suspicious.

Appendix: Proto-Semitic deverbal derivatives with non-trivial semantic shifts?

Throughout this article, the semantic relationship between the hypothetical derived nouns and their verbal sources has been rather straightforward and unambiguous: **mlʔ* ‘to be full’ > **maliʔ*- ‘full’, **milʔ*- ‘fullness’, **dkr* ‘to remember’ > **dikr*- ‘memory’, **kbr* ‘to bury’ > **kabr*- ‘grave’ etc.⁵⁴ However, it is tempting to suppose that less trivial semantic shifts were probably involved on some occasions. As I tried to demonstrate in Kogan 2005:153-62, a given set of root consonants was usually reserved for only one semantic concept (nominal or verbal) in Proto-Semitic. A pair of reliable and sufficiently deep PS reconstructions with homonymous consonantal sets is rather hard to find. That is why, when such examples are actually discovered, Semitists are often tempted to avoid postulating true consonantal homonymy, supposing that one of the two lexemes (usually the noun) is derived from the other through a kind of less trivial semantic shift. A rich collection of examples of this category can be collected from P. Fronzaroli’s *Studi*:

**dakar*- ‘maschio’ – **-dkur*- ‘invocare’ (1964:37)⁵⁵, **mašk*- ‘pelle (totta dal corpo)’ – **-mšuk*- ‘scuoicare’ (ibid. 41)⁵⁶, **parš*- ‘capelli fluenti’ – **praš*- ‘crescere’ (ibid. 43)⁵⁷, **šinn*- ‘dente’ – **šanin*-

52. Cf. Fox 2003:229 (“**Qutāl* is used for a few diminutives in many Semitic languages, although this use is neither productive nor common”).

53. For this comparison v. Huehnergard 2003:104.

54. It was for that reason that, with few exceptions, I found it justified to skip the relevant verbal roots from my presentation.

55. “Il rapporto fra il carattere rituale del ricordare, espresso da **-dkur*-, e la definizione del maschio come **dakar*- viene così giustificato storicamente” (1964:20).

56. “Un altro sostantivo, questa volta secondario, **mašk*- che indicava la pelle staccata dal corpo attraverso l’operazione di scuoicare o tirare via, **-mšuk*-” (1964:27).

57. “In quanto fluenti e sciolti sono indicati con una metafora presa dalla vegetazione rigogliosa” (1964:30).

‘simile, opposto’ ibid. 45)⁵⁸, *kabid(-at)-* ‘fegato’ – *kabid-* ‘pesante’ ibid. 47)⁵⁹, *dirāṣ-* ‘braccio’ – *-draṣ-* ‘seminare’ (ibid. 48)⁶⁰, **kapp-* ‘mano incurvata’ – **kpup-* ‘incurvare’ (ibid. 48)⁶¹, **šily-at-* ‘placenta’, **šalil-* ‘embrione’ – **šly*, **šll* ‘estrarre’ (ibid. 21), **nahīr-* ‘narice’ – **nhr* ‘forare’ (ibid. 30-31), **bašar-* ‘carne’ – **bšr* ‘portare una buona notizia’ (ibid. 52), **kabkab-* ‘stella’ – **kbb* ‘ardere’ (1965a:138), **gann(-at)-* ‘orto’ – **gnun-* ‘coprire’ (1969:24)⁶², **burr-* ‘grano’ – **barr-* ‘puro’ (ibid. 27)⁶³, **šušār(-at)-* ‘orzo’ – **šašar(-at)-* ‘capelli’ (ibid. 27, 12-13), **ʔalp-* ‘bue’ – **ʔalip-* ‘domestico, come familiare’ (ibid. 28)⁶⁴, **figl-* ‘vitello’ – **fagil-* ‘veloce’ (ibid. 30), **palg-* ‘torrente, come fosso’ (1968:288)⁶⁵, **wabl-* ‘torrente’ – **wbil-* ‘portare’ (ibid. 288), **hilāp-* ‘salice’ – **hlup-* ‘intrecciare’ (ibid. 291)⁶⁶, **muhr-* ‘animale giovane’ – **mahir-* ‘svelto’ (ibid. 292), **ʔiṣpur-* ‘(piccolo) uccello’ – **-spir-* ‘cinguettare’ (ibid. 295), **raḳḳ-* ‘tartaruga’ – **raḳiḳ-* ‘sottile’ (ibid. 296)⁶⁷, **ʔakbar-* ‘topo’ – **kabir-* ‘grande’ (ibid. 296)⁶⁸, **ʔarbay-* ‘locusta’ – **raby-* ‘adulto’ (ibid. 296)⁶⁹.

The immediate relevance of these examples for the main problem of the present investigation is not in doubt. If one succeeds in demonstrating that such nouns (most of which obviously belong to the deepest levels of PS) are indeed derived from the verbal roots in question, a substantial body of deverbal derivatives can be reconstructed for PS without much hesitation. The question is, therefore, whether these and similar derivational hypotheses can be defended and if they can, by what kind of arguments.

In my opinion, one’s evaluation of such hypotheses can be guided by three criteria.

1. Spread and distribution of the verbal viz. the nominal roots. Most nominal roots in question have an extraordinary wide distribution and with all probability belong to the oldest and most deeply rooted stock of PS basic lexicon. When the hypothetic source-verb has a comparable level of attestation, the derivational hypothesis cannot be excluded. Quite often, however, its attestation is limited to relatively small areas or even just a couple of closely related languages. It is of course undeniable that in some cases the putative source-verb may have been lost in most languages whereas the nominal root persisted everywhere, but one should rather avoid exploiting too often this slender possibility.

2. Cross-linguistic probability of the semantic evolution. Ideally, every non-trivial semantic shift should be justified by parallels from other linguistic areas. Indo-European, being extensively investigated

58. “**šim-* indicasse in origine, piuttosto che il singolo dente, i denti visti nel loro insieme, come due file che si oppongono” (1964:31).

59. “Definito l’organo ‘pesante’ ” (1964:33).

60. “Il nesso semantico andrà cercato nel gesto ampio del seminatore, per cui seminare può essere definito come ‘stendere il braccio’ ” (1964:34 and cf. 1969:9).

61. “Attestato su tutta l’area è anche **kapp-* che definisce la mano incurvata e quindi la mano che circonda o rapisce; parallela è la diffusione del verbo **kpup-* ‘incurvare’ ” (1964:34).

62. “L’orto veniva così ad essere definito non come il luogo recinto, ma come il terreno coperto da alberi che fanno ombra alle altre colture” (1969:5).

63. “Parebbe avere indicato in origine il grano “separato” con la trebbiatura, cioè liberato dalle glume” (1969:12).

64. “Domestico, nel senso di abituato, familiare, è reso dall’aggettivo di continuazione occidentale **ʔalip-*; in epoca comune dovè essere noto su tutta l’area, come mostra la diffusione del nome dei bovini domestici, **ʔalp-*, che ne è derivato” (1969:15, cf. also 1969:20).

65. “L’esistenza in arabo di un tema verbale parallelo col significato di ‘fendere’, attestato anche in aramaico con il significato più astratto di ‘dividere’, suggerisce che esso indicasse il fosso” (1968:273).

66. “Appare legittima l’ipotesi che il verbo **-hlup-* sia stato connesso al lessico comune con la nozione di intrecciare e che il salice sia stato definito per la sua importanza industriale nella stessa tecnica” (1968:278).

67. “Caratterizzata dalla corazza sottile almeno a giudicare dal significato dell’aggettivo corrispondente, **raḳiḳ-* ‘sottile’ ” (1968:285).

68. “Avrebbe dovuto originariamente riferirsi non al topo in generale ma a una singola specie” (1968:286).

69. “**ʔarbay-* può essere confrontato con l’aggettivo **raby-* ‘grande, adulto’, ciò che si accorda con l’indicazione dei testi che il nostro vocabolo indicasse la locusta pienamente sviluppata” (1968:286).

and geographically contiguous, suggests itself as a rich source of this kind of cross-linguistic semantic comparanda.

3. Evidence from non-Semitic Afroasiatic languages. If the concrete meaning in question can be detected among Afroasiatic cognates known for this or that PS nominal root, its deverbal origin becomes inherently unlikely, at least on the Proto-Semitic level. Needless to say, only fully reliable Afroasiatic parallels are of value for this purpose.

As a positive example satisfying each of the three criteria, **kabid(-at)-* ‘liver’ is to be mentioned. Firstly, the distribution of the verbal root **kbd* ‘to be heavy’ is almost as wide as that of the almost pan-Semitic anatomic term (it is only in Aramaic in MSA that the noun is present but the verb is missing). Secondly, the semantic development is conditioned by natural factors and cross-linguistic evidence for liver designated as a heavy organ is not lacking (Buck 1949:252). Finally, no reliable Afroasiatic cognates for this term have been discovered so far. It is worth emphasizing once more that even if this derivation is accepted, it is to be projected to the deepest level of PS. Accordingly, formulations like “Hebrew *kābēd* ‘liver’ is derived from Hebrew *kbd* ‘to be heavy’”, so deplorably ubiquitous in Semitological literature⁷⁰, are to be carefully avoided.

While a few other examples from Fronzaroli’s list can be supported by cross-linguistic evidence⁷¹ and have no obvious obstacles from the internal Semitic or Afroasiatic point of view, doubtful or even entirely unconvincing examples are by far more numerous. Thus, the proposed derivation of **šinn-* ‘tooth’ from **šanin-* ‘similar, opposite’ does not satisfy any of the three criteria mentioned above. On the one hand, the nominal root, attested throughout Semitic with practically no exception, is opposed to the rather uncertain verbal reconstruction based on Akk. *šanānu* ‘to become equal, to rival, to match’ and Gez. *tasannana* ‘to quarrel, dispute, contend with’ (for its critical evaluation v. LGz. 505). On the other hand, cross-linguistic evidence for this semantic development has never been adduced (and it must be stressed that *onus probandi* in such cases is entirely on the authors of this or that derivational hypothesis). Finally, many rather obvious cognates from various Afroasiatic branches (HSED No. 2250) make abundantly clear that the meaning ‘tooth’ for this root is considerably older than PS.

Further unconvincing examples from the above list include **ʔalp-* < **ʔalip-* (the nominal root is attested in Akkadian and Soqotri, thus belonging to the most archaic stock of PS animal lexicon, whereas the verbal root is not reflected outside Aramaic and Arabic, see further SED II No. 4), **ʔiʃpur-* ‘bird’ < **sʔr* ‘to whistle’ (the nominal root is much more widely attested than the verbal one; reliable Chadic parallels with the meaning ‘bird’ are known, v. HSED No. 432, SED II No. 212), **rakḳ-* ‘turtle’ < **rakik-* ‘thin’ (the semantic evolution seems to be nearly impossible to justify, note especially the paradoxical contrast between ‘kleine Schildkröte’ in AHW. 958 and ‘grande tortue’ in BK 1 90; see further SED II No. 190). Other innumerable examples scattered over Semitological studies but reasonably omitted by Fronzaroli from his compendia still await comprehensive critical analysis⁷².

Summing up: deverbal derivation implying less trivial semantic shifts was probably a feature of Proto-Semitic. Accordingly, at least some nominal roots commonly regarded as primary may in fact be old derivatives. The number of derived nouns that can be traced back to PS can be, therefore, potentially expanded. Every derivational hypothesis of this type is, however, to be taken with utmost caution and requires very serious justification before it is accepted.

70. Cf., e. g., KB 456 where *kābēd* II ‘liver’ is said to be “= I” (i. e., identical to the adjective *kābēd* ‘heavy’).

71. Thus, for ‘skin’ as derived from ‘to tear, to cut’ (admittedly, not ‘to draw’!) v. Buck 1949:200, for ‘river, stream’ as ‘breaking’ v. *ibid.*:43 (uncertain).

72. Eilers 1973 for whom “die sogenannten Nomina primitiva der klassischen Semitistik gibt es kategorienmäßig gar nicht” (p. 21) provides an ideal starting point for such an investigation.

Abbreviations of Languages and Dialects

Akk. – Akkadian, Amh. – Amharic, Arb. – Arabic, Arm. – Aramaic, Ass. – Assyrian, Bab. – Babylonian, Eth. – Ethiopian, Gez. – Geez, Har. – Harari, Hbr. (pB.) – Hebrew (post-Biblical), Hrs. – Harsusi, – JBA – Jewish Babylonian Aramaic, Jib. – Jibbali, JPA – Jewish Palestinian Aramaic, Jud. – Judaic Aramaic, LB – Late Babylonian, MB – Middle Babylonian, Mhr. – Mehri, MSA – Modern South Arabian, NA – Neo-Assyrian, NB – Neo-Babylonian, OA – Old Assyrian, OAk. – Old Akkadian, OB – Old Babylonian, Pho. – Phoenician, PCS – Proto-Central Semitic, PS – Proto-Semitic, PWS – Proto-West Semitic, SB – Standard Babylonian, Soq. – Soqotri, Syr. – Syriac, Tgr. – Tigre, Tna. – Tigrinya, Ugr. – Ugaritic, WS – West Semitic.

Abbreviations of Lexicographic Tools

| | |
|---------|---|
| AHw. | W. von Soden. <i>Akkadisches Handwörterbuch</i> . Wiesbaden, 1965-1981. |
| Bassano | F. da Bassano. <i>Vocabulario tigray-italiano e repertorio italiano-tigray</i> . Roma, 1918. |
| BDB | F. Brown, S. R. Driver, Ch. A. Briggs. <i>A Hebrew and English Lexicon of the Old Testament</i> . Oxford, 1951. |
| BK | A. de Biberstein-Kazimirski. <i>Dictionnaire arabe-français</i> . Vol. 1-2. Paris, 1860. |
| Brock. | C. Brockelmann. <i>Lexicon Syriacum</i> . Halle, 1928. |
| CAD | <i>The Assyrian Dictionary of the Oriental Institute, the University of Chicago</i> . Chicago, 1956–. |
| CDA | J. Black et al. <i>Concise Dictionary of Akkadian</i> . Wiesbaden, 2000. |
| DUL | G. del Olmo Lete, J. Sanmartín. <i>A Dictionary of the Ugaritic Language in the Alphabetic Tradition</i> . Leiden–Boston, 2003. |
| Fr. | G. W. Freytag. <i>Lexicon arabico-latinum</i> . T. I-IV. Halle, 1833. |
| HSED | V. E. Orel, O. V. Stolbova. <i>Hamito-Semitic Etymological Dictionary. Materials for a reconstruction</i> . Leiden–New York–Köln, 1995. |
| Ja. | M. Jastrow. <i>A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature</i> . New York, 1996. |
| JH | T. M. Johnstone. <i>Ḥarsūsi Lexicon</i> . Oxford, 1977. |
| JJ | T. M. Johnstone. <i>Jibbāli Lexicon</i> . Oxford, 1981. |
| JM | T. M. Johnstone. <i>Mehri Lexicon</i> . London, 1987. |
| K | T. L. Kane. <i>Amharic-English Dictionary</i> . Wiesbaden, 1990. |
| K Tna | T. L. Kane. <i>Tigrinya-English Dictionary</i> . Springfield, 2000. |
| KB | L. Koehler, W. Baumgartner. <i>The Hebrew and Aramaic Lexicon of the Old Testament</i> . Leiden-New York-Köln, 1994-2000. |
| LGur | W. Leslau. <i>Etymological Dictionary of Gurage (Ethiopic)</i> . Vol. III. Wiesbaden, 1979. |
| LGz | W. Leslau. <i>Comparative Dictionary of Geʿez (Classical Ethiopic)</i> . Wiesbaden, 1987. |
| LH | E. Littmann, M. Höfner. <i>Wörterbuch der Tigre-Sprache. Tigre-deutsch-englisch</i> . Wiesbaden, 1956. |
| LHar. | W. Leslau. <i>Etymological Dictionary of Harari</i> . Berkeley–Los Angeles, 1963. |
| LLA | A. Dillmann. <i>Lexicon linguae aethiopiae</i> . Lipsiae, 1865. |
| LS | W. Leslau. <i>Lexique Soqotri (Sudarabique moderne) avec comparaisons et explications étymologiques</i> . Paris, 1938. |
| SED I | A. Militarev, L. Kogan. <i>Semitic Etymological Dictionary</i> . Vol. 1. Anatomy of Man and Animals. Münster, 2000. |

- SED II A. Militarev, L. Kogan. *Semitic Etymological Dictionary*. Vol. 2. Animal Names. Münster, 2005.
- Sok. M. Sokoloff. *A Dictionary of Jewish Palestinian Aramaic*. Jerusalem, 1990.
- Sok. B M. Sokoloff. *A Dictionary of Jewish Babylonian Aramaic*. Ramat-Gan–Baltimore–London, 2002.

References

- Ambros, A. 2004. (in collaboration with S. Procházka). *Concise Dictionary of Koranic Arabic*. Wiesbaden.
- Blau, J. 1961. “Reste des *i*-imperfekts von ZKR, Qal”, *VT* 11:81–86.
- Buck, C.D. 1949. *A Dictionary of Selected Synonyms in the Principal Indo-European Languages*. Chicago–London.
- Bulakh, M. 2004. “Color Terms of Modern South Arabian Languages: a Diachronic Approach”, *Babel und Bibel* 1:269–82.
- Durand, J.-M. 2006. “Dictions et proverbes à l’époque amorrite”, *JA* 294:3–38.
- Eilers, W. 1973. *Die vergleichend-semasiologische Methode in der Orientalistik*, Wiesbaden.
- Fleisch, H. 1961. *Traité de philologie arabe*. Vol. 1, Beirouth.
- Fox, J.T. 2003. *Semitic Noun Patterns*, Winona Lake.
- Friedrich, J.–Röllig, W. – Guzzo, M.G. Amadasi. 1999. *Phönizisch-Punische Grammatik*. Roma.
- Fronzaroli, P. 1963. “Sull’elemento vocalico del lessema in semitico”, *RSO* 38:11–29.
- Fronzaroli, P. 1964. “Studi sul lessico comune semitico. I. Oggetto e metodo della ricerca. II. Anatomia e fisiologia”, *ANLR VIII/XIX/5-6*:1-55.
- Fronzaroli, P. 1965a. “Studi sul lessico comune semitico. III. I fenomeni naturali”, *ANLR VIII/XX/3-4*: 135-50.
- Fronzaroli, P. 1965b. “Studi sul lessico comune semitico. IV. La religione”, *ANLR VIII/XX/5-6*:246-69.
- Fronzaroli, P. 1968. “Studi sul lessico comune semitico. V. La natura selvatica”, *ANLR VIII/XXIII/7-12*: 287–303.
- Fronzaroli, P. 1969. “Studi sul lessico comune semitico. VI. La natura domestica”, *ANLR VIII/XXIV/7-12*:1–36.
- Hetzron, R. 1974. “La division des langues sémitiques”, in *Actes du premier Congrès international de linguistique sémitique et chamito-sémitique, Paris 16–19 juillet 1969*, The Hague–Paris, pp. 181–94.
- Huehnergard, J. 1992. “Historical Phonology and the Hebrew Piel”, in Bodine, W.R., ed., *Linguistics and Biblical Hebrew*, Winona Lake, pp. 209–29.
- Huehnergard, J. 2003. “Akkadian *h* and West Semitic *h*”, in L. Kogan, ed., *Studia Semitica* (FS A. Militarev) (Orientalia: Papers of the Oriental Institute, 3), Moscow, pp. 102–19.
- Huehnergard, J. 2004. “Afro–Asiatic”, in *The Cambridge Encyclopedia of the World’s Ancient Languages*, Cambridge, pp. 138-159.
- Huehnergard, J. 2005. “Features of Central Semitic”, in A. Gianto, *Biblical and Oriental Essays in Memory of William L. Moran* (BibOr 48), Roma, pp. 155–203.
- Huehnergard, J. 2006. “Proto-Semitic and Proto-Akkadian”, in Deutscher, G., Kowenber, M.J.C. eds, *The Akkadian Language in its Semitic Context: Studies in the Akkadian of the Third and Second Millennium BC*, Leiden, pp. 1–18.
- Kogan, L. 2005. “Observations on Proto-Semitic Vocalism”, *AuOr* 23:131–67.
- Kogan, L. 2006. “Old Assyrian vs. Old Babylonian: The Lexical Dimension”, in Deutscher, G., Kowenber, M.J.C. eds, *The Akkadian Language in its Semitic Context: Studies in the Akkadian of the Third and Second Millennium BC*, Leiden, pp. 177–214.
- Nöldeke, T. 1904. *Compendious Syriac Grammar*. London.

- Stol, M. 2004. "Wirtschaft und Gesellschaft in Altbabylonischer Zeit". in Charpin, ed., *Mesopotamien. Die altbabylonische Zeit* (Annäherungen 4), Fribourg–Göttingen, pp. 641–975.
- Streck, M.P. 2000. *Das amurritische Onomastikon der altbabylonischen Zeit 1: Die Amurriter, die onomastische Forschung, Orthographie und Phonologie, Nominalmorphologie* (AOAT 271/1), Münster.