Notes on the Emergence of New Semitic Roots
in the Light of Compounding

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Abstract

Independently of the question as to whether bi- or triradical roots have historical preponderance in Semitic, there are clear cases of Semitic verbal and nominal roots that have emerged through a process of compounding or integration of additional elements (verbal or nominal affixes and even prepositions). In this paper, an attempt will be made to establish a hierarchical typology of such processes of morphophonological re-analysis, in both historical and modern times.

Key words: affix, re-analysis, root, compounding

1 Introduction

It has long been recognized that new roots in Semitic can emerge through the re-analysis of verbal or nominal affixes. On the one hand, there has been the theory of "matrices et étymons", propagated notably by Georges Bohas (e.g., BOHAS 2000) and a number of his pupils, which builds on the observation that roots with two common consonants and a homorganic, but different third consonant, often share a common semantics. Christopher Ehret (notably EHRET 1995) has developed this theory even further, in trying to reconstruct uniconsonantal semantic core elements at an early stage of Afroasiatic. This well-known line of thought will not be pursued here (for an overview of the pros and cons, cf. e.g., ZABORSKI 1991). Rather, with a focus on Arabic and Hebrew, I will give an overview of various processes that can be described as "compounding", which involve either the integration of grammatical morphemes—verbal and nominal affixes, including prepositions—or the creation of new roots by exploiting acronyms or the conjunction of clipped elements, captured by the Arabic term *naḥt*, literally 'sculpture'.

2 Root formation through compounding

2.1 Integration of grammatical morphemes

Adam MEZ (1906) was among the first to present relevant examples in Arabic, an example being the root √ s-b-q in Arabic *sabaqa* 'to leave behind', which was explained as resulting from the compounding of the causative afformative *s-* (also present in the Arabic form X,

together with the reflexive afformative *-t-*) and the root √ b-q-y in Arabic *baqiya* 'to remain behind'. The productivity of such processes can also be demonstrated by a modern Arabic neologism. Next to the form IV of the root √ s-l-m *ʔaslama* (IPF *yuslimu*) 'to render oneself in security, become a Muslim', a verb *ʔaslama* (IPF *yuʔaslimu*) with the meaning 'to islamize' has emerged (in possible analogy to verbs such as *ʔamraka* 'to americanize'), which synchronically represents the root √ ʔ-s-l-m.

This kind of re-analysis is not specific to Arabic. HUEHNERGARD (2014: 14), based on KURYŁOWICZ (1973: 7) and others, adduces the common-Semitic verb √ š-k-n, Akkadian *šakānum* 'to place, put, set'. As the Central Semitic cognates of *šakānum*, Hebrew *šākan/ šāḵēn*, Aramaic *šəken*, and Arabic *sakana* 'to dwell' are intransitive, HUEHNERGARD assumes two roots in this context: the transitive Akkadian root can be explained to derive from an *š*-causative form of the verb √ k-w-n 'to be firm, fixed', whereas the intransitive Central Semitic verbs with the meaning 'to dwell' derive directly from a root √ s-k-n (Ugaritic features both roots). I would suggest that "to dwell" could also be rephrased in a transitive way as "to make a living" or the like and thus could also be explained an an original causative. Another example of this kind offered by MEZ (1906) is the Arabic verb √ r-t-ʕ *rataʕa* 'to graze', derived from form VIII of the common Semitic root √ r-ʕ-y. The same phenomenon surfaces in the nominal form *taqwā* 'belief', derived from form VIII *ittaqā* of the verbal root √ w-q-y. A comparable Hebrew case is presented by the secondary root √ t-ḥ-l, attested in the hifʕīl-binyan as *hitḥīl* 'to begin', ultimately deriving from the root √ ḥ-l-l with the same meaning in the attested in the hifʕīl-binyan as *hēḥēl*. Diachronically, a comparable process can be observed in the re-analysis of the Arabic noun *madīna* 'city', which historically constitutes a noun of the pattern /maC_1C_2aC_3a/ based on the root √ d-y-n, and which synchronically functions as a noun of the pattern /C_1aC_2īC_3a/, based on the root √ m-d-n. Accordingly, the historical plural form is *madāʔin*, whereas the modern plural form is *mudun*.[1] HUEHNERGARD (2014: 10) cites the Biblical Hebrew plural form *dəlāṯōṯ* 'doors', which was generated by re-analyzing the final feminine *t* of the singular *deleṯ* 'door' as a root consonant.

In modern Hebrew, such processes are especially productive. USSISHKIN (1999: 407) lists, among others, the following examples, in which nominal affixes are integrated into new expanded roots. In most cases, quadri-radical roots emerge, which are fitted into the piʕʕel or hitpaʕʕel binyanim; in the case of the noun (*tertiae infirmae*) *qaṣe* (√ q-ṣ-h), the hifʕil binyan is used:

root	surface	gloss
√ q-m-ṣ	*hitqameṣ*	'to be a miser'
√ q-ṣ-h	*qaṣe*	'edge'
√ m-ṣ-h	*miṣa*	'to treat exhaustively'
√ x̱-z-q	*hix̱ziq*	'to hold'
√ s-p-r	*safar*	'to count'

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1 WEHR's dictionary lists the noun *madīna* under both √ d-y-n- and √ m-d-n.

derived form	gloss	new root	surface	gloss
qamṣ + an	'miser'	√ q-m-ṣ-n	*hitqamṣen*	'to be a miser'
qiṣ + on + i	'extreme'	√ q-ṣ-n	*hiqṣin*	'to exaggerate'
ta + mṣ + it	'summary'	√ t-m-ṣ-t	*timṣet*	'to sum up'
ta + xzuk + a	'maintenance'	√ t-x-z-q	*tixzeq*	'to maintain'
mi + spar	'number'	√ m-s-p-r	*misper*	'to enumerate'

Next to verbal and nominal affixes, prepositions also can be integrated in newly emerging roots. Among the more prominent cases figures Arabic *ǧāʔa* (√ ǧ-y-ʔ) 'to come' +*bi-* 'in, with', which in Arabic dialects surfaces as *ǧāb* (√ ǧ-y-b) 'to bring'. A similar case already occurred in Classical Syriac, where the verbal root √ n-t-n 'to give' is typically construed with the dative marker *lə-* 'to', resulting in a new root √ n-t-l 'to give' (cf., e.g., EDZARD 2011).

2.2 Root formation by exchange of a root consonant

Both new nouns, adjectives and verbs can emerge as the result of blending and (preceding) clipping (see below section 2.5). Of special interest is the case, where only one letter of one part of the blend replaces another letter in the other part, thus creating a new root. In the case of *tapuax* 'apple' (√ t-p-x) + *zahav* 'gold' > *tapuz* 'orange' ("gold apple"), the first letter *zayin* of *zahav* replaces the last letter *xet* of *tapuax*, thus creating the new root √ t-p-z. In the case of *pele(ʔ)* 'wonder' + *ṭelefon* 'telephone' > *pele(ʔ)fon* 'smart phone', the firt letter *pe* of *pele(ʔ)* replaces the first letter *ṭet* of *ṭelefon*. And in the case of *yadid* 'friend' + *zayin* 'penis' > *yaziz* 'lover' ("penis friend"), the first letter *zayin* of *zayin* (in itself histori-cally a "polite" form using just the first letter of the word *zanav* 'tail') twice replaces the letter *dalet* of *yadid*.[2]

2.3 Root formation via acronyms

Acronyms as new roots occur in modern Arabic, notably in religious, political, and tech-nical context. As in many European languages, one can observe a tendency to create acro-nyms that simultaneously have a meaning of their own. The following two political examp-les are prominent:

fatḥ (<f-t-ḥ >):	*ḥarakat at-taḥrīr al-filasṭīnīya*	'Palestinian liberation movement'
ḥamās (<ḥ-m-ā-s>):	*ḥarakat al-muqāwama al-ʔislāmīya*	'Islamic revolt move-ment'

In the first example *fatḥ*, the order of the constituents (<ḥ-t-f>) is reversed, in order to yield the meaning "conquest" and to avoid the meaning "slow death".[3] The second example *ḥamās* in itself means "rage, enthusiasm".

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2 Cf. BOLOZKY 1999: 217.

3 Cf. BLAU 1981: 174.

Religion constitutes another realm where a number of new roots based on acronymity have emerged. The following list of nouns is due to LARCHER (2010):

root	surface	base
√ ǧ-ʕ-f-d / √ ǧ-ʕ-f-l	ǧaʕfada / ǧaʕfala	ǧuʕiltu fidā-ka 'may I be made your ransom!'
√ ḥ-s-b-l	ḥasbala	ḥasb-iya llāh 'God suffices me!'
√ ḥ-w-q-l / √ ḥ-w-l-q	ḥawqala / ḥawlaqa	lā ḥawla wa-lā quwwata ʔillā bi-llāh 'power and force is only in God'
√ ḥ-y-ʕ-l	ḥayʕala	ḥayya ʕalā ṣ-ṣalāti, ḥayya ʕalā l-falāḥ 'come to prayer, come to salvation!'
√ d-m-ʕ-z	damʕaza	ʔadāma llāhu ʕizza-ka 'may God make endure your power!'
√ s-b-ḥ-l	sabḥala	subḥāna llāh 'glory be to God!'
√ s-m-ʕ-l	samʕala	(as-)salām(u) ʕalay-kum 'peace be with you!'
√ ṭ-l-b-q	ṭalbaqa	ʔaṭāla llāhu baqāʔa-ka 'My God extend your life!'
√ k-b-t-ʕ	kabtaʕa	kabata llāhu l-ʕaduww (or ʕaduwwa-ka) 'may God crush the/your enemy'
√ m-š-ʔ-l / √ m-š-k-n	mašʔala / maškana	mā šāʔa llāh (kāna) 'what God will (obtains)'
√ h-y-l-l / √ h-l-l-l	haylala / hallala	lā ʔilāha ʔillā llāh 'there is no god except God'

Acronyms likewise abound in modern Hebrew.[4] Military-political as well as cultural terms in general often follow this pattern. Even the most famous philosopher in Jewish history, Maimonides, is mostly referred to under the form of an acronym, *rambam* (<r-m-b-m>), reflecting the initial letters of *rav moše ben maymon* 'Maimonides'. Here are a few well-known examples:

tanax (<t-n-k>):	*tora neviʔim ketuvim* 'Tora-Prophets-Scriptures'
ʔeṣel (<ʔ-ṣ-l>):	*ʔirgun ṣevaʔi leʔumi* 'National Armed Organization'
ṣahal (<ṣ-h-l>):	*ṣevaʔ-hagana le-yisraʔel* 'Israel[i] Defense Forces'
ʔašaf (<ʔ-š-p>):	*ha-ʔirgun le-šixrur falesṭin* 'PLO'
rambam (<r-m-b-m>):	*rav moše ben maymon* 'Maimonides'

Acronyms can develop to fully productive roots, as happened in the case of √ d-w-x *duax* 'report' (properly *din ve-xešbon* 'law and accounting'), from which one can derive the verb *divax* 'to report' and *davax* 'reporter. A comparable examples is the English noun *tip* (reward for good service), an acronym derived from 'to insure promptness', from which one has derived the verb *to tip*.

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4   For clipping and acronymy, cf. KREIDLER 2000.

2.4 Root formation via clipping and blending

In Arabic, root formation via clipping and blending has been an age-old phenomenon known under the term *naḥt*, literally 'sculpture'. The grammarian ʕAbd al-Qādir al-Maġribī, for instance, suggests the following classification of hybrid forms in his treatise *al-ištiqāq wa-t-taʕrīb* (cf. STETKEVYCH 1970: 49 f.):[5]

an-naḥt al-fiʕlī (verbal):	سمعل *samʕala* 'to say *as-salāmu ʕalay-ka*'
an-naḥt al-waṣfī (adjectival):	صبط *ḍabaṭa* 'to hold fast' + ضبر *ḍabara* 'to jump' > ضبطر *ḍibaṭr* 'strong' (said of a lion)
an-naḥt al-ismī (nominal):	جلد *ğaluda* 'to become strong' + جمد *ğamada* 'to become firm' > جلمود *ğulmūd* 'big rock'
an-naḥt an-nisbī (relational):	طبرخزي *ṭabarḫazī* 'belonging to Tabaristan and Khwarizm'

In all cases, either new quadri-literal or quinqui-literal roots emerge, to wit √ s-m-ʕ-l, √ ḍ-b-ṭ-r, √ ğ-l-m-d, and √ ṭ-b-r-ḫ-z.

Modern counterparts include examples such as *kahrabāʔ* 'electricity' + *maġnāṭīs* 'magnet' > *kahraṭas* 'electro-magnetism'. An especially interesting case is the neologism *ṣayġam* 'phoneme', derived by blending *ṣīġa* 'form' + *ṣawt* 'sound', in which the European morpheme *-eme* is imitated, as in the more usual form *ṣawtam* 'phoneme'.[6]

The term *ra(ʔ)smāl* 'capital' represents an interesting case, an annexation synchronically re-analyzed as a compound, having a precursor already in Qurʔānic *ruʔūsu ʔamwāli-kum* 'your wealth' (Q 2:279). The re-analysis as a compound is clearly established by the attested modern plural form *rasāmil* 'estates', reflecting a new root √ r-s-m-l.

The formation of new roots through a process of clipping and blending is especially productive in modern Hebrew. Here is a selection of examples (cf., e.g., EDZARD 2006):

noun + noun ([NN]N):

qol 'sound' + *noaʕ* 'motion'	>	*qolnoaʕ* 'cinema'
migdal 'tower' + *ʔor* 'light'	>	*migdalor* 'lighthouse'
midraxa 'pavement' + *rexov* 'street'	>	*midrexov* 'pedestrian street'
kadur 'ball' + *regel* 'foot'	>	*kaduregel* 'football'
rakevet 'train' + *kevel* 'cable'	>	*rakevel* 'cable car'

number + noun ([NumN]N):

tlat (aram.) 'three' + *ʔofan* 'wheel'	>	*tlatʔofan* 'tricycle'

noun + adjective ([NAdj]N):

xay 'living creature' + *daq* 'tender'	>	*xaydaq* 'bacterium'

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5 Cf. also GRÜNERT 1893.

6 Cf. VERSTEEGH 2001: 183.

adjective + noun ([AdjN]N):
ram 'loud' + *qol* 'sound'   >   *ramqol* 'loud-speaker'

adjective + adjective ([AdjAdj]Adj):
šmanman 'fat' + *namux* 'short'   >   *šmanmux* 'stout'

verb + verb ([VV]N):
daχaf 'push' + *xafar* 'dig'   >   *daχpor* ''bulldozer'

verb + verb ([VV]V):
hištaχṣen 'boast' + *hitχaṣef* 'be insolent' >   *hištaχṣef* 'be boastful and insolent'

**integration of blends by clipping into
common noun patterns**
ben-leʔumi 'international'   >   *binʔum* 'internationalization'

Both older and more recent varieties of Aramaic feature re-analysis of annexations as compounds. In Syriac, the annexation *bēṯ qḇūrā* '[house-of] tomb' is assigned a plural form marked at the right edge, *bēṯ qḇūrē* 'tombs', and the annexation *šeṯesstā* (status constructus *šeṯ* of *eštā* 'base' + *esstā* 'wall') takes a special plural form, *šeṯessē* 'fundaments', equally marked at the right edge.[7]

JASTROW (1993: 190, 222) mentions a few compound formations in Ṭuroyo (modern Eastern Aramaic) as the following ones:

bar (st. cs.) 'son' + *ḥmóho* 'father-in-law'   > *barḥmóho* 'brother-in-law'

rīš (st. cs.) 'head' + *dáyro* 'monastery'   > *rəšdáyro* 'abbot'

Such compounding processes also occur in Ethio-Semitic. Amharic adjective-noun phrases occasionally function as compounds, e.g., *kəft* 'open' + *ʔaf* 'mouth' > *kəftaf* 'foolish' ("open-mouthed"). Amharic also features some true blends, e.g., *dämoz* 'salary', representing the concatenation of *däm* 'blood' and *wäz* 'sweat' (necessary ingredients for making a living).[8]

3 Conclusion

Compounding and blending, while being less frequent than in Indo-European languages, nevertheless have emerged as powerful mechanisms in Semitic. This observation also pertains to "compound roots" or expanded roots, i.e., newly emerging Semitic roots, in which nominal prefixes, prefixes of diatheses, or even prepositions governed by the respective verb are integrated into the new root.[9] This question is touched upon here here without prejudice to the question of "original" bilateralism vs. trilateralism in Semitic roots.[10]

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7 Cf. NÖLDEKE 1898: 83f.

8 Cf. SHIMELIS 2014: 213.

9 Cf., e.g., MEZ 1906 and EDZARD 2011.

10 Cf., e.g., ZABORSKI 1991.

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