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Restructured or archaic? The hunt for shared morphological innovations involving Egyptian

Lameen Souag

1 Introduction

The existence of a relationship between Egyptian, Semitic, Berber, Cushitic, and Chadic has been generally accepted in various forms for well over a century, with the precise boundaries of the phylum finally established by Greenberg¹ under the new name of Afroasiatic. While no consensus reconstruction of their common ancestor has so far been possible², the striking matches in core grammar and functional morphemes across these five families cannot plausibly be explained by coincidence or contact³, and a sparser set of apparent cognates in basic vocabulary further supports the hypothesis of common ancestry. The boundaries of these five branches are unambiguous; however, no consensus exists on whether some of these five are more closely related to each other than to other branches.

Where, then, does Egyptian fit within Afroasiatic? Assuming a basically arborescent model – not a trivial assumption, but one that may be justified by the profound differences between Afroasiatic subgroups – the appropriate method for determining the answer is to look for shared innovations.⁴ Shared sound shifts would be useful, but genuine cognates are so rare across Afroasiatic as to make them difficult to identify. At the time depth of Afroasiatic, shared innovations within core morphology and functional items seem to be more useful.

Implementing this in practice is more difficult. Convergent drift can yield apparent shared innovations that in fact developed independently of one another, such as the the loss of grammatical gender in Afrikaans and English. Borrowing and calquing in an areal contact situation can allow innovations to spread between speech varieties that are already only distantly related, producing a misleading impression that the innovation must have emerged at an early period; the Arabic elative, for instance, has been borrowed into Neo-Aramaic and Modern South Arabian⁵. Genuine genetically shared innovations in core morphology – some of the most valuable cladistic indicators – can be irretrievably obliterated by subsequent changes; Indo-European was recognized as a family in large part thanks to the rich verbal agreement and case morphology shared by Sanskrit, Latin, and Greek, but this system has left only minimal traces in languages like English or Bengali.

For much of Afroasiatic – especially the Chadic and Cushitic branches – directly attested historical data is minimal until the last few centuries, aggravating all of these problems. Early attestation,

1 Greenberg 1963.

2 Ratcliffe 2012.

3 Pending further work on their history, I see no similarly compelling reason to conclude that the Omotic languages (whether or not they constitute a valid family) are related to Afroasiatic, and will not discuss them further here.

4 Campbell 1991; Jacques and List 2019.

5 Souag ms.

however, is no guarantee of archaism: despite being attested from as early as the third millennium BC, Ancient Egyptian morphology appears strikingly innovative in many respects. An examination of potential shared innovations linking Egyptian with some branches of Afroasiatic to the exclusion of others suggests that the pitfalls discussed above are widespread; the evidence for Egyptian grouping more closely with any other subgroup of Afroasiatic is weak and contradictory.

2 Uninformative shared features

2.1 Prefix conjugation

Semitic, Berber, and Cushitic share a set of subject agreement markers (with 2SG = 3FSG) that on its own would suffice as compelling evidence for their mutual relationship, illustrated in Table 1. As Satzinger⁶ cogently argues, this prefix conjugation appears likely to be the oldest surviving verbal conjugation in Afroasiatic: of all the systems attested, it is the hardest to link to the independent (or even oblique) pronouns. In Semitic it continues to be widespread, especially in imperfectives. Within Cushitic, it remains productive only in Beja and Saho-Afar, but survives residually in other languages, such as Somali, within a number of synchronically irregular verbs⁷. In Berber, it remains productive everywhere but, except in the so-called “future” forms of Ghadames and Sokna⁸, has been partially remodelled using affixes borrowed from the suffix conjugation. In the 3rd person, even Chadic may preserve some traces of the same system, although the interpretation of the data is controversial. The distribution of 3rd person markers across Chadic yields no compelling Chadic-internal motivation for projecting Hausa's contrast between 3MSG subject marker *yà* and 3MSG independent pronoun *shì* back to proto-Chadic; nevertheless, similar forms are sporadically attested in other Chadic languages, and there is no convincing Chadic-internal scenario for the development of Hausa *yà* from an independent pronoun either⁹.

Table 1. The prefix conjugation in Semitic, Berber, Cushitic, and Chadic.

	Source	3MSG	3FSG	2SG	1SG	1PL
Arabic (Semitic)	(personal knowledge)	<i>y-</i>	<i>t-</i>	<i>t-</i>	<i>ʔ-</i>	<i>n-</i>
Somali (Cushitic)	Saeed 1999, 108–118.	<i>y-</i>	<i>t-</i>	<i>t-</i>	∅-	<i>n-</i>
Ghadames (Berber)	Kossmann 2013, 91.	<i>y-</i>	<i>t-</i>	<i>t-</i>	∅-	<i>n-</i>
Hausa (Chadic, West)	Newman 2000, 591.	<i>yà</i>	<i>tà</i>	<i>kà</i>	<i>ìn / nà</i>	<i>mù</i>
Luri (Chadic, West)	Caron 2004, 195.	<i>yaa</i>	<i>yaa</i>	<i>gə</i>	<i>ʔá</i>	<i>mə</i>
Mbara (Chadic, Biu-Mandara)	Barreteau 1985.	<i>a</i>	<i>ti</i>	<i>ki</i>	<i>mi</i>	<i>mu</i>
West Dangla	Peust 2014, 221.	<i>ɲá</i>	<i>tá</i>	<i>kì</i>	<i>nà</i> ~ <i>nì</i> <i>nò</i>	

Whether or not traces of the prefix conjugation survive in Chadic, nothing of the sort is attested in Egyptian. In this branch, such remnants of subject agreement as survive are strictly suffixal, while the main paradigm for verbal subject marking perfectly matches pronominal possessive markers and – like those markers – is in complementary distribution with overt noun phrase subjects: *wbn.f* “he rose” vs. *wbn r* “the sun rose”, like *nb.f* “his lord” vs. *nb t̤.wy* “lord of the two lands”.

6 Satzinger 2003.

7 Zaborski 1975.

8 Kossmann 2000; Souag 2017.

9 Voigt 1986.

At first blush, this absence of the prefix conjugation might seem to constitute evidence that Egyptian was the first to branch off, with all the rest constituting a separate branch. A recent endorsement of this hypothesis, motivated primarily by the early attestation of Egyptian, comes from Peust¹⁰: “I therefore assume that the prefix conjugation represents a common innovation of all branches of Afroasiatic but Egyptian, which means that we have to posit a common subnode covering all these branches.” However, most Egyptian verbal forms seem to be originally deverbal nominal forms (infinitives, participles, etc) reinterpreted as finite verbs, possibly from participles¹¹, but potentially exemplifying the process of “insubordination”¹². Only the stative conjugation and the imperative remain as relics of the situation prior to this development. The lack of similarly conjugated finite forms elsewhere in Afroasiatic, except where they have arisen secondarily, suggests that this verbalisation of nominals was an Egyptian-specific innovation with no deeper history; the wide spread of the prefix conjugation suggests that it was present prior to the expansion of insubordination in pre-Egyptian¹³. The absence of the prefix conjugation thus provides no convincing evidence on the subgrouping of Egyptian within Afroasiatic. While the stative and the imperative can be compared directly with finite forms in other languages, all other Egyptian verbal forms must rather be compared with the somewhat less stable domain of verbal nouns and participles elsewhere.

2.1 Suffix (stative) conjugation

The suffix conjugation is a more promising domain for comparison. Unlike the prefix conjugation, this is shared by earlier stages of Egyptian with all branches except Chadic, as illustrated by Table 2. Its only Egyptian reflex, the stative conjugation, came to be used as a resultative and, especially for motion verbs, as a perfect¹⁴. In West Semitic, it developed a perfective sense; in Berber, where present, it is limited to stative verbs describing qualities. Cushitic preserves only arguable traces, notably with copulas and adjectives.

Table 2. *The suffix conjugation across Afroasiatic.*

	Egyptian	Akkadian	Kabyle	Ghadames	Afar	Somali
	Allen 2013, 67.	Buccellati 1997.	Kossmann 2009.		Banti 2004b.	
1sg	.kj	-āku	-əγ	-ǎƆ	-iy-o	-i
1pl	.nw	-ānu	-it̄	-it	-in-o	-in
2msg	.tj	-āta	-əḏ	-ət	-it-o	-id
2fsg		-āti				
2mpl	.twnj	-ātunu	-it̄	-it	-it-o-n	-idin
2fpl		-ātina				
3msg	.j	∅	∅	∅	∅	∅
3fsg	.tj	-at	-əṭ	-ǎt		
3mpl	.wj	-ū	-it̄	-it	∅-o-n	
3fpl	.tj	-ā				

10 Peust 2012, 241.

11 Satzinger 2015.

12 Evans 2007.

13 Satzinger 2003.

14 Oréal 2009.

While Chadic languages too occasionally show suffixed object agreement, the 2sg marker in such cases is velar rather than coronal¹⁵. Such cases are more probably to be interpreted as reflecting direct grammaticalisation from postverbal weak pronouns rather than a paradigm directly comparable to the Afroasiatic suffix conjugation. It is thus not excluded that the existence of the suffix (stative) conjugation is a shared innovation of these four branches in which Chadic never participated. But loss in Chadic is an equally plausible explanation, all the more so given that this conjugation is known to have been lost in later Egyptian and in many Berber and Cushitic languages.

The form of this conjugation might have been expected to provide evidence relevant to subgrouping in this domain. Unfortunately, as can be seen from Table 2, it seems not to. Innovations such as the merger of plural forms in Berber to *-it* or (probably) the loss of 3rd person forms in Cushitic are specific to single subgroups rather than being shared by more than one subgroup. The only relevant connection uniting a subset of subgroups that could be drawn here is between Egyptian 3f.pl. *-tj* and Berber pl. *-it*, and this is hardly convincing, since the *t* in the Egyptian form seems more likely to be marking the feminine.

2.3 Imperatives

Singular masculine imperatives across Afroasiatic tend to be identical to a bare stem of the verb. Egyptian does not distinguish gender in imperatives in any way discernible in writing – although Coptic shows such a distinction in one suppletive verb (“come”, m.s.g *amou*, f. sg. *amê*), matching suggestively well with Semitic f.sg. **-ī*¹⁶. Berber and Cushitic¹⁷ show no gender distinctions in singular imperatives (indeed, Berber shows no such distinctions in singular subject agreement in general). The apparent exception of Beja, which has m. sg. *-a* vs. f. sg. *-i*, is synchronically a manifestation of allocutive agreement¹⁸ rather than of subject agreement. It is possible to interpret the Beja, Coptic, and Semitic evidence as suggesting common inheritance of a feminine singular imperative suffix **-i*, probably lost early on through phonetic change in Berber (which has no suffixes of the form *-V*, and no final short vowels). Chadic languages rarely distinguish gender in singular imperatives; nevertheless, the singular suffix *-i*, probably reconstructible for proto-West Chadic according to Schuh¹⁹, may be compared to this feminine singular elsewhere.

Plural imperatives were probably formed with a suffix **(C)ā*: cp. Cushitic **-Cā*²⁰, West Chadic **-a*²¹, and Semitic f.pl. **-ā*. In Berber m. pl. **-āwāt* (*-ət* / *-wət* / *-at*) and f.pl. **-māt*, factoring out a shared suffix *-āt* suggests a previous m. pl. ***-āw* which could speculatively be analysed as a combination of this suffix with an element *w* comparable to the Semitic m.pl. **-ū*. If the latter is borrowed from the external plural of nouns in both cases, then this would constitute a plausible shared innovation between Berber and Semitic. The absence of vocalisation makes it difficult to see exactly where Egyptian pl. *-j* fits into this picture, but once again it shows no secure shared innovations with other branches.

15 Schuh 2017, 192, 281–286; Prickett 2012, 87.

16 Allen 2013, 109.

17 Banti 2004a.

18 Antonov 2015.

19 Schuh 2017, 208.

20 Banti 2004a.

21 Schuh 2017, 208; Newman 1990.

2.4 Causative morphology

The formation of causatives or factitives with a prefix *s-* is a well-known Afroasiatic feature, widely found in Egyptian (*s-ḥ* “cause to live”²²), Semitic (Ugaritic *š-ḥrb* “cause to enter”²³), Berber (Siwi *sə-zwər* “cause to get big”²⁴), and Cushitic (Beja *si-ngad* “cause to stop”²⁵). For Chadic, no *s*-causative is reconstructible at all: the Hausa direct causative suffix *-s/-r*²⁶ is isolated within the family, and the best candidate for a causative suffix is instead something like **-d*²⁷. However, in many languages outside Chadic the *s*-causative has been obscured by later developments: thus Central Semitic weakened causative **s-* to **h-* and finally **ʔ-* (with the latter disappearing altogether in many Arabic dialects), most Cushitic languages turned **s-* into a suffix as their verbal lexicon came to be dominated by what were originally nouns followed by a light verb “say”, and Egyptian gradually replaced productive *s*-causatives with a periphrastic causative based on the verb (*r*)*dj* “to give”, becoming a *t*-prefix²⁸. In light of its instability in other branches, the Chadic situation can plausibly be seen as reflecting an early loss, rather than causative **s-* being a common innovation everywhere else.

3 Illusory shared innovations resulting from drift

3.1 Feminine *-t* on nouns

All branches of Afroasiatic show traces of a feminine singular marker *t*, variously making its appearance in demonstratives, articles, adjectives, nouns, and relative markers. Only three branches, however, show clear evidence for this *t* being lexicalized as a suffix attached to most feminine nouns. The difference may be illustrated by the word for “daughter”: Egyptian *zʾ-t*, Arabic (Semitic) *bin-t*, Kabyle (Berber) *wəl-t*, Tamasheq (Berber) *wālǎ-t* vs. the consistently *t*-less forms found in Cushitic (e.g., Bilin *ʔəkʷra*²⁹, Oromo *ilm-ee*³⁰, Iraqw *das-i*³¹) or Chadic (e.g., Hausa *ʼyā*, Mafa *dám*³²). At first sight, this suggests a “Boreafasian”³³ subgrouping of Egyptian, Semitic, and Berber, neatly separated from the sub-Saharan branches.

However, a closer look at the evidence makes this more questionable. Within Cushitic and Chadic, no feminine suffix **-t* can be reconstructed, but several languages have independently begun developing it through grammaticalization of what appear to be former articles: thus Beja (Cushitic) distinguishes indefinite *ʔo:(r)=t* “daughter” from definite *t=ʔo:r* “the daughter”³⁴, and Hausa (Chadic) indefinite *yārinyā* “girl” from definite/anaphoric *yārinyār̃* < **yārinyā-t* “the (aforementioned) girl”³⁵. This reveals that a lexical feminine **-t* suffix can easily be developed from functional morphemes inherited from proto-Afro-Asiatic, whether independently or by calquing similar developments in neighbouring languages, and hence that the presence of this

22 Rubin 2004, 477.

23 Sivan 2001.

24 Souag 2013, 177.

25 Vanhove 2017, 83.

26 Jaggat 2017.

27 Schuh 2017, 287.

28 Allen 2013, 95.

29 Appleyard 2007.

30 Stroemer 1995.

31 Mous 1993.

32 Barreteau and Le Bléis 1990.

33 Ehret 1995, 483–485.

34 Vanhove 2017, 58.

35 Newman 2000, 145.

innovation is not a reliable guide to subgrouping. Its absence must be treated with similar caution: Hebrew, colloquial Arabic, and Coptic all show a phonological loss of original **-t* in the feminine singular suffix, and some Berber varieties (notably Chaoui³⁶) show a similar tendency to drop **t-* > **h-* > \emptyset in feminine prefixes.

3.2 Analytic genitive with *n*

Egyptian, Berber, and Chadic all form genitive constructions using a particle *n* (possessed *n* possessor): Egyptian *nsw nj Kmt* “king of Egypt”, Kabyle (Berber) *agəllid n tizgi* “king of the forest”, Hausa (Chadic) *sarki-n Gombe* “king of Gombe”, Kera (Chadic) *hàrgá n-əm-tí* “your goat”³⁷. No such construction appears reconstructible for Cushitic, which – unusually for Afroasiatic – typically shows pre-nominal genitives, nor for Semitic, whose possibly cognate preposition **l-* “to, for belonging to” is not typically used in adnominal genitives. This gives the impression of a possible subgrouping of Egyptian with Berber and Chadic.

However, such a conclusion would be obviously indefensible. All three branches show clear evidence for a construction using direct juxtaposition, as in proto-Semitic: Egyptian: *z’ r’* “son of Ra”, Kabyle (Berber) *əg-ma* “brother” < “son-mother”, Ngamo (Chadic) *òsò bô* “jaw” = “bone-mouth”, Gude (Chadic) *sák hárfin* “fish stomach”³⁸. Conversely, within historical times, some Semitic languages have developed analytic genitives with reflexes of **l-*, such as Western Neo-Aramaic (e.g., *marōy-lə krīta* “inhabitants of the village”³⁹). The presence of this construction in multiple branches is thus best explained as reflecting common developments from an old determiner or preposition, with no implications for subgrouping.

4 Arguable shared innovations involving Egyptian

4.1 Mediopassive / reciprocal morphology

Three Afroasiatic subgroups show a productive nasal prefix forming mediopassives or reciprocals: Semitic, Berber, and Cushitic. In Semitic, this prefix is consistently **n-* (e.g., Arabic *in-fataħa* “open up”). Berber and Cushitic, however, both witness a form in **m-* (dissimilated in Berber to **n-* before roots historically containing labials), e.g., Tahaggart *m-ākras* “be bound together”⁴⁰, Beja *am-garām* “be enemies to one another”⁴¹. Egyptian shows possible traces (not very productive) of a diathesis strategy comparable to the Semitic one; a prefix *n-* seems to have been used to form certain types of non-agentive intransitives⁴², while the use of *n-* in the formation of quadriliteral verbs closely parallels Akkadian and Geez⁴³. Nothing similar to either is found in Chadic, probably due to independent loss given the massive reshaping of verbal morphology there.

If the *m-* and *n-* forms really are cognate, then Egyptian's use of *n* would appear to be an innovation shared with Semitic; the correspondence can more easily be explained as a shift from **m* > **n* following place assimilation to the following consonant, reanalysed as involving the default nasal *n* (**mC* > **nC*), than vice versa. However, given that the **m-* morphemes are primarily reciprocal, a value never found in Semitic or Egyptian **n-*, it is also possible that the two are historically distinct.

36 Guedjiba 2012, 222.

37 Schuh 2017, 524.

38 Ibid., 509, 518.

39 Arnold 1989, vol. I.

40 Prasse 2010.

41 Vanhove 2017.

42 Vernus 2009.

43 Rubin 2004, 478.

If so, this isogloss would provide no good evidence for innovation; the **n* could be a proto-Afroasiatic feature lost in Cushitic and merged with reflexes of *m*- in Berber.

4.2 Verbal nouns

Non-stative Egyptian verbs show no agreement with their subjects; rather, if the subject is pronominal, they take suffixes identical with those used to mark pronominal possession on nouns. These suffixes appear to be cognate to those used elsewhere in Afroasiatic to mark pronominal possessors, as discussed above. It thus appears plausible that these verbs derive from verbal nouns, and therefore that their forms should be compared to verbal nouns elsewhere in Afroasiatic. Their vocalisation is of course not transcribed in hieroglyphic materials, but some relevant data is available. Middle Babylonian transcriptions of Egyptian names give *na-pa* for *nfr* “be beautiful”⁴⁴, and Coptic evidence supports the reconstruction of three vocalisation classes of trilateral stems: *CáCaC*, *CaCáC*, and *CiCiC*, the latter two being reserved for intransitives only⁴⁵. *Prima facie*, these appear strikingly similar to the Arabic verbal noun forms *CaCC* (e.g., *ḥart* “ploughing”), *CaCāC* (e.g., *ḥaṣād* “harvest”), and *CiCC* (e.g., *fiʿl* “action”). All three of these can safely be projected back to proto-Semitic⁴⁶. Berber similarly makes highly productive use of reflexes of **CāCaC* (e.g., Siwi *a-ktar* “carrying” < *aktar* “carry”, Tahaggart *a-fārag* “fencing” < *afraǧ* “fence (v.)”), and regularly forms **CəCəC* from quality verbs (Kabyle *tə-CCəC*, e.g., *tə-mləl* “whiteness” < *imlul* “be white”; in forms such as Tahaggart *tə-CCəC-e*, e.g., *tə-məɣr-e* “greatness” < *imɣar* “be big”, the *-e* suffix is cognate to Semitic **-ay*⁴⁷); however, it shows nothing obviously comparable to Egyptian *CáCaC* or Semitic *CaCC*. In Cushitic, the vowels of verbs are typically lexical rather than being templatically assigned; Beja has vocalic templates for verbal nouns⁴⁸, but its trilateral template *CiCuuC* is hardly relatable – although its rarer *miCCaaC* could reasonably be linked to *CaCāC*. Chadic makes little use of trilaterals, making it all the more difficult to discern potential cognates. If Egyptian *CáCaC* is indeed cognate to Semitic *CaCC*, then this could be taken to suggest a subgrouping of Egyptian with Semitic; the distribution of **CiCC* and **CaCāC* would then suggest a more distant link with Berber and, at a further remove, Cushitic. Once again, however, nothing proves that the templates *CaCC* and *CiCC* are innovations rather than retentions.

4.3 Broken plurals

The expression of nominal plurality is strikingly variable across Afroasiatic, with many languages showing great morphological complexity in this domain, often including several different internal (“broken”) plural templates. While some kind of internal-*a* plural seems a good candidate for proto-Afroasiatic, much of the wildly diverse plural morphology found in specific languages cannot securely be reconstructed back very far. Even forms shared across branches are not always reconstructible further back. For instance, the plural template *CvCC-ān* is shared by Berber (e.g., Kabyle *a-brid* “road” > *i-bərd-an*) and, not very productively, Arabic (e.g., *kaṭīb* “dune” > *kuṭb-ān*). However, in the absence of any comparable attestation anywhere else in Semitic despite its long written history (the *-ān-* plurals of Akkadian cannot convincingly be linked), this may well constitute an Arabic innovation within Semitic⁴⁹, whose resemblance to Berber would thus be coincidental.

Unfortunately the consonantal nature of the Egyptian hieroglyphic script makes it difficult to get a full picture of its plural marking system, although later data from Coptic indicates the presence of at

44 Vycichl 1991.

45 Allen 2013, 99.

46 Kogan 2015, 158.

47 van Putten 2018.

48 Vanhove 2017, 103–105.

49 Ratcliffe 1998, 240–242.

least some internal marking. Nevertheless, while the preferred plural marking strategy of Egyptian is external, it does yield some evidence for an internal plural in *-ū-, attested by words such as *ʕabad “month” vs. *ʕabūd(-aw) “months”, yielding Coptic *ebot* vs. *ebêt*⁵⁰. A priori, this appears comparable to southern Semitic broken plurals in -ū-, e.g., Arabic *qalb* “heart” > *qulūb*, Geez *kalb* “dog” > *aklūb*⁵¹, based on which Ratcliffe⁵² reconstructs a plural template *CvCu(u)C- for proto-Semitic nouns of the singular form *CaCC. In Cushitic, the closest match that he finds is Afar plurals in *CaCooCa*, corresponding to *CaCaC* singulars⁵³; this template, however, is isolated within the family⁵⁴, making its development difficult to reconstruct. All these cases seem to share a vowel polarity shift from a low vowel in the singular to a high one in the plural. Berber, despite its wealth of internal plural forms, does not offer any good comparisons to these forms (the ablaut plural -u-...-a-, e.g., Kabyle *a-mayag* “jaw” > *i-muyag* “jaws”, is characterised by imposing *a* in the last syllable and high vowels everywhere else in the word irrespective of vowel quality or word length, and can hardly be taken as directly cognate.) Likewise, in Chadic, Newman’s⁵⁵ survey of plural morphology reveals some evidence for internal-*a* plurals but none for internal-*u*.

The distribution alone does not provide good evidence on whether or not -ū- plurals are innovative. They would have to be if they are taken to derive from incorporation of the external plural suffix (Semitic nominative *-ū, Egyptian .w), but that assumption provides no obvious way to explain their association with low-vowel singulars. If they are innovative, then the presence of -ū- plurals in Egyptian might suggest an Egyptian-Semitic subgroup, potentially also including Cushitic. Even in that case, however, the distribution – centered on the Red Sea coast – is worryingly suggestive of the possibility of diffusion through contact.

4.4 Dual

Both Egyptian and Semitic attest to a dual, respectively reconstructible as *-a(y) (orthographic <j>; m. .w-j, f. .t-j⁵⁶) and nom. *-ā / obl. *-ay. No other branch of Afroasiatic bears witness to a comparable dual ending or indeed to an unambiguous dual at all, excluding occasional lexeme-specific instances of the borrowing of Arabic duals into heavily Arabic-influenced languages. However, the ancient Egyptian dual had disappeared by the Coptic period, and became unproductive in many Semitic languages, even in relatively early attestations such as Geez⁵⁷. The dual thus appears diachronically rather unstable in the families where it is attested; its apparent absence outside of Egyptian and Semitic should not be given much weight for subclassification.

4 Shared innovations not involving Egyptian

4.1 Imperfectives

Alongside the prefix conjugation, Berber, Semitic, Cushitic, and Chadic all famously share an imperfective in -a- / -a; cf. Greenberg⁵⁸, Voigt⁵⁹, etc. The passage from suffixation to infixation appears likely to have taken place independently within Chadic⁶⁰, and as such is not a strong

50 Loprieno 1995, 59–61.

51 Ratcliffe 1998, 167.

52 Ibid., 221.

53 Ratcliffe 1992, 547.

54 Zaborski 1986.

55 Newman 1990, 48–51.

56 Allen 2013, 61; Spiegelberg 1909.

57 Heide 2006.

58 Greenberg 1952.

59 Voigt 1987.

60 Newman 1977.

argument for subgrouping. Only Berber and Semitic, however, securely share an imperfective formed by combining *a*-ablaut with geminating the middle consonant of a trilateral verb – a very striking shared innovation going far beyond chance, and as such a strong argument for grouping Berber and Semitic together⁶¹. Unfortunately, the restructuring of the verbal system on the basis of nominal forms implies that we should not expect to find traces of these features in Egyptian, even if vowels and gemination had been adequately transcribed in hieroglyphic writing; the original form of the imperfective would have been replaced.

	Source	pf.	impf.	caus. pf.	caus. impf.
Akkadian “cut”	Huehnergard 2011, 623.	<i>iprus</i>	<i>iparras</i>	<i>ušapris</i>	<i>ušapras</i>
Mehri “kneel”	Johnstone 1987, 52.	<i>(yə-brēk)</i>	<i>yə-bōrək</i>	<i>(yə-hábrək)</i>	<i>yə-həbrōk</i>
Zenaga “be dirty”	Taine-Cheikh 2008, 443.	<i>y-irkăy</i>	<i>i-răkkăy</i>	<i>y-ăšširkăy</i>	<i>y-ăššărkăy</i>
Tamasheq “learn”	Prasse and äg-Sidiyän 1985.	<i>i-lmäđ</i>	<i>i-lämmäđ</i>	<i>i-ssəlmäđ</i>	<i>i-səlmäđ</i>
Siwi “learn”	cf. Souag 2013, 188.	<i>y-əlməd</i>	<i>i-ləmməd</i>	<i>yə-ssəlməd</i>	<i>i-səlməd</i>
Beja “gather”	Bubenik 2017, 124.	<i>i-dbíl</i>	<i>danbúil</i>	<i>i-s-dabíl</i>	<i>i-s-dabiíl</i>
Mubi “alter”	Jungraithmayr 1997.	<i>fílik</i>	<i>fíléék</i>	-	-

4.4 Possessive pronouns

The possessive pronoun series – also typically found following prepositions, and often in other functions as well – is a classic pan-Afroasiatic isogloss:

	Egyptian	Akkadian	Kabyle	Beja	Hausa	Lamang
	Allen 2013, 65.	Huehnergard 2011, 84.	Naït-Zerrad 2001, 45.	Vanhove 2017, 48.	Newman 2000, 481–482.	Lukas 1964.
1sg	<i>-j</i>	<i>-ī, -ya</i>	<i>i-w</i>	<i>-i:</i>	<i>-ā, -wa</i>	<i>-da (-i)</i>
1pl	<i>-n</i>	<i>-ni</i>	<i>nn-əy</i>	<i>-o:n</i>	<i>-mù</i>	<i>-məŋi</i>
2msg	<i>-k</i>	<i>-ka</i>	<i>i-k</i>	<i>-o:k</i>	<i>-kà</i>	<i>-gha</i>
2fsg	<i>-t̄</i>	<i>-ki</i>	<i>i-m</i>		<i>-kì</i>	
2mpl	<i>-tn</i>	<i>-kunu</i>	<i>n-wən</i>	<i>-o:kna</i>	<i>-kù</i>	<i>-ghəni</i>
2fpl		<i>-kina</i>	<i>n-kʷənt</i>			
3msg	<i>-f</i>	<i>-šu</i>	<i>i-s</i>	<i>-o:</i>	<i>-sà</i>	<i>-ni</i>
3fsg	<i>-s</i>	<i>-ša</i>	<i>i-s</i>		<i>-tà</i>	

61 Rössler 1950, 479; Kossmann and Suchard 2018.

3mpl	-sn	-šunu	n-sən		-sù	-ta
3fpl		-šina	n-sənt			

In this paradigm, a possible shared innovation between Berber and Chadic may be observed: first person singular with *w* (Egyptian enclitic 1sg *wj* is presumably comparable, but serves a different function). However, no plausible shared innovations seem to involve Egyptian itself.

4.5 Free and enclitic pronouns

Alongside free pronouns, Old Egyptian has a distinct but closely connected enclitic pronoun series, used for direct objects as well as for subjects of non-verbal predicates. The best comparisons across Afroasiatic for these forms do not consistently derive from the same paradigms. For the first person, comparison is relatively straightforward, and provides little information on subgrouping; third person forms are more diverse across Afroasiatic, but likewise suggest no particular subgrouping. In the second person, however, an isogloss can be observed separating Semitic and Cushitic on the one hand from Egyptian, Berber, and Chadic⁶² on the other – namely, the former’s use of 2nd person free pronouns matching the endings of the suffix conjugation:

	Egyptian	Akkadian	Kabyale	Kemant	Somali	Hausa	Mafa
	Allen 2013, 69–70.	Buccellati 1997, 84.	Naït-Zerrad 2001, 45–48.	Appleyard 1975.	Saeed 1999.	Newman 2000, 476–477.	Barreteau and Le Bléis 1990.
2msg.free	<i>twt</i>	<i>atta</i>	<i>kəčč</i>	<i>əntə</i>	<i>adi-ga</i>	<i>kai</i>	<i>ká</i>
2fsg.free	<i>tmt</i>	<i>atti</i>	<i>kəmm</i>			<i>kē</i>	
2mpl.free	(later)	<i>attunū</i>	<i>kunwi</i>	<i>əntändiw</i>	<i>idin-ga</i>	<i>kū</i>	<i>kíná</i>
2fpl.free	<i>(j)nt-tn</i>	<i>attinā</i>	<i>kunnəmti</i>				
2msg.acc	<i>kw</i>	<i>kāti</i>	<i>-ik</i>	<i>ku</i>	<i>ku</i>	<i>kà</i>	<i>ka</i>
2fsg.acc	<i>tm</i>	<i>kāti</i>	<i>-ikəm</i>			<i>kì</i>	
2mpl.acc	<i>tn</i>	<i>kunūti</i>	<i>-ik^wən</i>	<i>əntä</i>	<i>idin</i>	<i>kù</i>	<i>kíné</i>
2fpl.acc		<i>kināti</i>	<i>-ik^wənt</i>				

5 Conclusions

Among the inherited core morphological features that Egyptian shares with other branches of Afroasiatic examined here, not a single one can confidently be identified as a post-*proto-Afroasiatic* innovation. This - like the lexically based results of Peust⁶³ – tends to suggest that Egyptian was part of the first set of branches to separate from the rest.

On the other hand, it is striking that all four of the possible but uncertain shared innovations involving Egyptian unite it with Semitic. While this result is suggestive, it should not be given too much weight. For one thing, Semitic is the only branch whose available attestations are contemporary with Old/Middle Egyptian; even if all five branches separated at the same time, we would thus expect shared retentions to be more frequent between Semitic and Egyptian than

62 Blažek 1995.

63 Peust 2012.

between any of the other branches, whose earliest attestations are considerably later. For another thing, the only really clearcut and compelling shared morphological innovation observed, the imperfective template, links Semitic with Berber (as does the imperative plural, less securely), suggesting a somewhat different tree. Other plausible shared innovations show an interlocking distribution difficult to reconcile with a tree model, and the massive reshaping of Chadic and to a lesser extent Egyptian morphology leaves open the possibility that they once shared some of these innovations.

In general, the changes shared between different branches seem to be dwarfed by those specific to each, suggesting that the bulk of each branch's development happened after its linguistic separation from all the rest. The traditional five-branch model thus remains an imperfect but relatively good approximation of the linguistic history of Afroasiatic.

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