Making some sense of Babel and afterwards

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The statements made about language in the early chapters of Genesis are summarized before looking at the ‘Tower of Babel’ and the confusion of languages that resulted. A brief survey of the world’s main language families is presented together with a rudimentary look at the phenomenon of language ‘isolates’ and the sheer variety of grammatical structures. This article focuses on the Semitic and Indo-European language families and considers some Hebrew nouns where connections with other families are evident and others where they are not. Historical linguistics says that each word tells its own story, but what can we learn from that story?

The single language referred to in the early chapters of the book of Genesis (11:1) and spoken by the inhabitants of the world from Adam to the Tower of Babel is fertile ground for speculation. Even some scholars, who would not give much credence to these chapters, postulate a proto-world language, with cognates between widely different languages sometimes cited as evidence of an original language. For example proto-Indo-European *deik² ‘to point’, hence Latin digitus ‘finger’ and Greek deiknumi ‘to show’ can be compared with Eskimo tik ‘finger’, Nilo-Saharan dik ‘one’, proto-Austro-Asiatic *tak ‘one’ and Turkish tek ‘only’.³

The early chapters of Genesis make several important points about the world’s first language that can be summarized here:

1) Adam named every living creature that God brought to him (Genesis 2:19), but on what basis? Did he just invent a combination of sounds or did he try to describe the creature before him, in which case in what language? Did this mandate extend to other areas too and were any of these terms preserved in later languages?

2) The Table of the Nations (Genesis 10:1–32) divides the peoples of the world into three groups—the descendants of Noah’s sons Japheth, Ham, and Shem. A total of 70 nations are listed. There is no simple link between descent from a particular son of Noah and language, but generally speaking Japheth fathers the Indo-European-speaking peoples, Ham, the Hamitic-speaking peoples and Shem, the Semitic-speaking peoples.⁴

3) The story of the Tower of Babel in Genesis 11:1–9 gives an explanation for linguistic diversity and makes three basic points:
   a) Originally there was just one universal language (11:1).
   b) When the Lord confused the language of the people, new languages were miraculously generated. What and how many of these new languages there were is unknown, but the result of the Lord’s action was clear—confusion (11:9), the people were unable to understand each other and so scattered over the face of the whole earth.
   c) The location of this incident is placed in Shinar which may be the land inhabited by the Sumerians, i.e. southern Iraq (11:1). The city, of which the tower was a part, was Babel (‘confused’), the Hebrew word for Babylon (11:9).

4) Whatever language was spoken before the Tower of Babel, the writer (or compiler) of Genesis views that world from his later Hebrew perspective thus:
   a) Adam means ‘man’ and also sounds like the Hebrew adāmāh ‘ground’.
   b) Cain (4:1) sounds like the Hebrew for ‘brought forth’ or ‘acquired’.
   c) Nod (4:16) means ‘wandering’.
   d) Seth (4:25) probably means ‘granted’.
   e) Methuselah (5:21) would seem to be a combination of the roots mt ‘to die’ and šlḥ ‘to send’, significant perhaps that according to Genesis’ own chronology Methuselah dies in the year of the flood.
   f) Noah (5:29) sounds like the Hebrew for ‘comfort’.

It is evident that the writer of the early chapters of Genesis seems to enjoy ‘playing with words’ for literary effect.

Historical linguistics

Over the last 200 years or so linguists have developed a discipline that can be termed ‘historical linguistics’. Where sound changes can be traced over the centuries in written texts the principles behind these changes can then be extrapolated back into the past to deduce so-called ‘protolanguages’. The precise reconstructed forms of given words in protolanguages will often differ from scholar to scholar and sometimes the strange signs and symbols used seem to obscure rather than elucidate the sound changes that are being advanced.

Language families and isolates

In the modern world there are 7,102 known languages.⁵ Most of the world’s languages can be grouped into what are commonly called ‘language families’. The largest 11 families are made up of over 100 languages each and account for 5,384 (75%) of the world’s languages.⁶ Smaller language
families account for a further 1,608 languages. A total 136 language isolates are claimed, making up 32% of all the c. 420 language families known (figure 1). The term ‘isolate’ is somewhat subjective. Sister languages in different regions of the world may exist, but may not have been identified. Furthermore, sister languages may have once existed, but are no longer spoken.

What is clear is that the vast majority of the world’s languages are part of clearly definable language families. Behind each language family a proto language is posited, such as proto-Semitic and proto-Indo-European, but it needs to be stated that these are theoretical reconstructions, there are no texts of protolanguages, and linguists do not always agree on the forms that they posit.

It is noteworthy that although languages within a language family have many common features, surprisingly few of these features are shared with languages from another language family, suggesting that the protolanguages and progenitors of modern isolates arose at the original confusion of languages that the Book of Genesis records as happening at the Tower of Babel.

The Semitic language family

We should briefly note the main languages that are in some way relevant to the study of the Old Testament. Hebrew, the language in which the vast majority of the Old Testament is written, belongs to what is called the ‘Semitic language family’. This was so named by late 18th century linguists, after Noah’s son Shem (Genesis 5:32), and was represented in the ancient world by:

1) Akkadian, a language spoken in Mesopotamia (modern Iraq) by the Assyrians and Babylonians.
2) Ugaritic, the language of a Syrian seaport.
3) Phoenician, spoken along the Mediterranean coast of Lebanon and Syria.

4) Aramaic, a language spoken in Syria (which became the official language of the Persian empire in which portions of the Old Testament books of Ezra and Daniel were written) and the languages of Israel’s neighbours—Ammon, Moab, and Edom.

In the modern world Arabic, Amharic, the language of Ethiopia, and Maltese are also part of the Semitic language family. All these languages seem to have originally stemmed from a single tongue, which scholars have termed ‘proto-Semitic’, but of which no texts have survived. Modern-day linguists would place the 74 languages of the Semitic family within a wider family termed Afro-Asiatic, which has 372 identifiable languages.

The world plays evident in the early chapters of Genesis may have also worked in proto-Semitic (perhaps even in proto-Afro-Asiatic), but almost certainly would not have worked in another language family.

The Indo-European language family

Ancient languages such as Greek and its predecessor Mycenaean Greek, Latin, Old Persian, plus Hittite and several other languages of ancient Anatolia (modern Turkey) such as Luvian and Lycian, belong to the so-called ‘Indo-European language family’. Such diverse ancient tongues as Armenian and Gaulish were also Indo-European. Avestan (spoken in Iran), Sanskrit (the ancient classical language of India), and Tocharian (once spoken in Chinese Turkestan and attested in manuscripts dating from the 6th–8th centuries AD) are other examples of what is now the most widespread language family in the world. It is of course the family that includes such widely spoken languages as English, French, German, Russian, and Spanish.

Approximately 45% of the world’s population speaks an Indo-European language. It would seem that all the 443 Indo-European languages from Portuguese to Punjabi and from Swedish to Sanskrit ultimately derive from the same source that scholars term ‘proto-Indo-European’, but of which, once again, no texts have survived.

Other language families within the wider biblical world

Sumerian, spoken in southern Mesopotamia (modern Iraq) and arguably the world’s oldest attested language, has no relatives, either ancient or modern. It can thus rightly be classed as an ‘isolate’.

Ancient Egyptian can be classed in the wider Afro-Asiatic language family, which was traditionally termed ‘Hamito-Semitic’.

Other language families, peripheral to the world of the Bible, include the Kartvelian (or southern Caucasian) language family, exemplified by modern Georgian, Svan, and Laz; the northern Caucasian language family, exemplified...
by Ubykh (now extinct\textsuperscript{15}) and Abaza, (Hurrian and Urartian, once spoken in eastern Anatolia (modern Turkey) may have been isolated or may have affinities with this group); and the Turkic language family which is part of a wider family known as ‘Altaic’.

**Variety in world languages**

It is also worth noting just how much variety there is among languages and language families. Some features of biblical Hebrew contrast with many other languages. The seven examples given below are representative, not comprehensive. The first three can be illustrated from the Bible’s first verse:

\[
\text{b}\hbar \text{-rēšî târûd lōhîm ēt-haš-sāmayîm wē-ēt hā-āreṣ}
\]

“In (the) beginning created God the heavens and the earth.”

1) The first word begins with \(b\)-, a preposition ‘in’. Hebrew, like English, has prepositions before the nouns they govern. Other languages have postpositions, the equivalent of saying ‘(the) beginning in’.

2) In biblical Hebrew the standard word order in a sentence is verb, subject, object. Thus: verb ‘created’, subject ‘God’, object ‘the heavens and the earth’. Other languages generally place the verb in the middle (as in English) or at the end (as in Turkish).

3) Hebrew marks definite objects with a marker –ēt, in this case ēt-haš-sāmayîm wē-ēt hā-āreṣ ‘the heavens and the earth’. Many languages (e.g. Latin) mark subjects and objects with particular noun cases, whilst others (e.g. English) rely on word order to do this. But this is not the only way—a totally different system called ‘ergative’, found in some 21% of the world’s languages, which marks the subject of an intransitive verb (a verb not having an object) in the same way as the direct object of a transitive verb. There may even be traces of an ergative in Hebrew.\textsuperscript{16}

Other features of biblical Hebrew cannot be illustrated from the Bible’s first verse, but are worthy of note thus:

4) Biblical Hebrew (like English) is non-tonal. This contrasts with a tonal language like Chinese where \(m\)a with a level tone means ‘mother’, with a rising tone means ‘flax’, with an end rising tone means ‘horse’ and with a falling tone is an interrogative.\textsuperscript{17}

5) Hebrew, like other Semitic languages, is based around roots consisting of consonants, usually three in number. Normally vowels and affixes distinguish related meanings. Thus the root \(šp\)t produces \(sāpāt\ ‘he judged’, \(yśpāt\ ‘he will judge’, \(šōpēt\ ‘a judge’, and \(mišpāṭ\ ‘judgment’. In some other languages the root is followed by a series of morphemes that string together to mark different components of meaning. This is called an ‘agglutinative language’ (like Turkish). In other languages additions are made to the root (inflections) to mark noun cases and verbal conjugations (like in German or Latin).

6) Hebrew nouns have two grammatical genders—masculine and feminine. Adjectives also have separate masculine and feminine forms. Greek adds a neuter gender, but some language families such as Turkic and Kartvelian do not distinguish gender at all. Hebrew also distinguishes gender in the second person of the verb, which many other languages do not do.

7) Hebrew, like most languages, employs a decimal counting system (based on 10), but some languages use a vigesimal (based on 20) system.\textsuperscript{18}

Which combination of these and other features was employed in the original language is indeterminable, but now we can only marvel at the diversity present in the world’s languages.

No wonder the peoples of the world after Babel were confused!

**Cultural borrowing**

Many inhabitants of the Old World are aware that such well-known produce as potatoes and tomatoes\textsuperscript{19} are examples of New World products being borrowed by the Old World—a process that is sometimes called ‘cultural borrowing’. As people come into contact with plants, animals, substances, materials, or objects that were hitherto unknown to them the default position, it would seem, is to borrow the names by which they were already being called. It is not surprising then that one would expect to find examples of cultural borrowing too in the pages of the Hebrew (and Aramaic) Bible. A classic case is the list of musical instruments, written in Aramaic, repeated several times in Daniel 3, where the majority of instruments are clearly of Greek origin. So if Hebrew words can be shown to be cognate (representing the same original word or root) with words in other languages what does that tell us of the history of the words used in the Bible?

This brief study looks at nine examples of what may be cultural borrowing in the Hebrew Bible. All the examples are nouns and have been chosen because cognates can be clearly traced in other languages or other language families. Thus there are: two plants or plant products—‘apple’ and ‘wine’; four animals—‘horse’, ‘camel’, ‘elephant’, and ‘lion’; two metals—‘iron’ and ‘gold’; and a single manufactured article—‘ship’.

It is of course possible that as speakers of Hebrew came into contact with plants, animals, substances, materials, or objects that were hitherto unknown to them that they borrowed such terms from the languages around—as English did with ‘potato’ and ‘tomato’. However, as we have remarked earlier, the fact that Genesis 2:19 specifically states that Adam named every living creature gives the first man the mandate of naming the living creatures all around him.

Does the fact that the terms for ‘iron’ (Genesis 4:22) and ‘wine’ (Genesis 9:21) occur in descriptions of the world before the Tower of Babel suggest that the origin of these
words is in the language spoken before the Tower of Babel? Are cases where the Hebrew word is cognate with an Indo-European word or a word from some other language family any indication of that word coming from the language spoken before the Tower of Babel? It may be significant that ‘camel’, ‘horse’, ‘lion’, and ‘ship’ first occur later in the book of Genesis (12:16; 47:17; 49:9, 13 respectively), so clearly they too are all ‘early words’.

Let us now look at nine examples of possible ‘cultural borrowing’. Most are from one language family to another. The items listed below are grouped according to language families with which the examples can be compared.

A. Semitic and Indo-European cognates

There are three examples of words being borrowed from the Indo-European family or of the Hebrew word being borrowed into the Indo-European family.

1) Ship

The common Hebrew term for ‘ship’ is oniyyāh, cognate with Ugaritic any, and Egyptian inaya all of which may be traced to a proto-Indo-European *nahw ‘to float’, ‘to sail’ which in turn occasioned Greek naus, Latin navis, and Sanskrit náu. The common Akkadian term for ‘ship’ eleppu is clearly different (figure 2).

2) Gold

Hebrew has a number of different words for ‘gold’. One of the less common terms ḥārūṣ is used in Psalm 68:14; Proverbs 3:14; 8:10–19; 16:16, and Zechariah 9:3. It is cognate with Akkadian ḥurāṣu and Ugaritic ḥrṣ and would seem to have been borrowed by several Indo-European languages, e.g. Mycenaean Greek kuruso and Greek chruso. In Hittite ḥarašu came to mean ‘bronze’. Sumerian shows a different word in guškin which may be related to Armenian (v)oski and Finnish vaski (in this case = ‘copper’) (figure 3).

3) Lion

There are a number of different Hebrew words for ‘lion’ (Panthera leo), but the one selected here for discussion is lābiy, perhaps more exactly ‘lioness’, which is cognate with Egyptian rw(b). Ugaritic lbaru, and Akkadian labbu. The Indo-European terms illustrated by Hittite walwa, Mycenaean Greek rewopi, Greek leōn, and Latin leo may be related to Hebrew lābiy. However the common Akkadian term nēšu, the Sumerian urmaḫ, and Sanskrit simha are not related to the above or to each other.

It is worth noting that in Old Testament times lions were not confined as at the present to Africa and India. Both Samson and David encountered them in Israel (Judges 14:5 and 1 Samuel 17:34 respectively) where the last lion was probably killed (near Megiddo) during the Crusades in the 13th century (figure 4).

B. Semitic, Indo-European and even wider cognates

There are examples of cognates extending beyond the Semitic and Indo-European families, two perhaps into the languages of the Caucasus and one into the Afro-Asiatic family.

1) Horse

The Hebrew term sūs for ‘horse’ (Equus caballus) is cognate with Akkadian sīṣu and Egyptian ššm.t. But the cognates extend wider too into the Indo-European language family with the consonant -s- being preserved in Luwian dšw, Lycian esbe, Avestanaspā, and Sanskrit dāvā. It is generally proposed that all these forms are derived from the
proto-Indo-European *ekʰwos, hence Mycenaean Greek iko from an original *(h)i(k)kwos, Latin equus, and Tocharian B yakwe. Greek has a change to -p- with hippoc.27

Behind the proto-Indo-European *ekʰwos a root *herh ‘to plough’ is proposed.28 Another proposal is a derivation from an Indo-European root *ōkū ‘swift’.29 Alternatively the same meaning ‘swift’ is advanced from the northern Caucasian languages Ubykh qā and Abaza tʰara (from *ʰeqqʰeqʰ ‘to run’).30

Of the major ancient languages only Sumerian is radically different with anše.kur.ra ‘donkey from the (eastern) mountains’ being first mentioned in a text of the Third Dynasty of Ur (traditionally dated to c. 2100 BC).31 The horse is recorded as being present in Egypt during the time of Joseph (Genesis 47:17) (figure 5).

2) Vine / Wine

The vine Vitis vinifera (from the wild form Vitis sylvestris) produces grapes, which naturally ferment to produce wine. The Hebrew term for ‘wine’ yayin has clear cognates in several other Semitic languages, e.g. Ugaritic yn and Arabic wayn (meaning ‘black grapes’32). A proto-Semitic form *wayn is postulated with which one of the Egyptian words for wine wms.(t) would seem to be cognate.33 But the cognates extend far wider to the proto-Indo-European term *woino, the supposed origin of Hittite wiyana, Mycenaean Greek wono, Greek (w)oinos, and Latin vinum. A proto-Indo-European root *w(e)i ‘to weave’, ‘to plait’, ‘to twist’ describing the grapevine is advanced for this word.34

It could be that the vine originated in the southern Caucasus where grape pips in a carbonized or petrified state have been found at a number of so-called Neolithic sites.35 Georgian ǧvino and Laz ǧvini from the southern Caucasian (or Kartvelian) language family are advanced as examples of a Caucasian origin for this root.36

It is interesting to note a detail from the Old Testament story of Noah. Following his disembarkation from the ark, which had landed on one of the mountains of Ararat (ancient Urartu, broadly modern eastern Turkey), Noah planted a vineyard and became drunk on the produce. (Genesis 9: 20–21).

However it should be noted that not all ancient languages borrowed this term. Egyptian yrp, Akkadian karāna,37 and Sumerian geštin are clearly not related to the above (figure 6).

3) Elephant

The term for ‘elephant’ does not occur directly in the Hebrew Bible, but it is concealed in the twice-occurring phrase šen habbîm translated ‘ivory’ in 1 Kings 10:22 and its parallel 2 Chronicles 9:21. Šen is ‘tooth’ and habbîm a plural cognate with the Egyptian ʒbw and Sanskrit ibhāh ‘elephant’ and Latin ebur ‘ivory’. Other Indo-European languages such as Mycenaean Greek erepa, Greek elephas, and Hittite laḫpa have cognates.

Five species of elephant were known in antiquity of which the African bush elephant Loxodonta africana, the African forest elephant Loxodonta cyclotis, and the Indian elephant Elephas maximus indicus are still extant. The Egyptian ʒbw may have been the term from which other languages borrowed—itsl perhaps having been borrowed from a word such as *elu in an unknown Hamitic (=Afro-Asiatic) language.38 With the addition of the Egyptian definite article -p- and a shift of -l- to -r- the Akkadian piru results. The -l- is retained in the Arabic fil.38

The now extinct Syrian elephant Elephas maximus asurus, which was a sub-species of the Indian elephant Elephas maximus indicus, is shown in a painting from the 15th century BC tomb of the Egyptian vizier Rekhmire in Thebes. An elephant is depicted on the Black Obelisk of the Assyrian king Shalmaneser III, found at the Assyrian city of Nimrud.
and dating from 841 BC. The accompanying inscription says that Shalmaneser received his female elephants as tribute from Egypt, suggesting that the elephant in question was the now-extinct North African elephant *Loxodonta africana pharaoensis* (figure 7).

C. Where cognates are not traceable across language families

There are several examples where the above pattern does not apply. There is an example of cognates being limited to the Semitic language family, with several different terms being used elsewhere.

1) Iron

The Hebrew term for ‘iron’ is *barzel*, cognate with Akkadian *parzillu* and Arabic *farzilun*, but maybe there is a connection with the Sumerian *an.bar* “sky-iron” = “meteoric iron” and the southern Caucasian Svan *berez* and Latin *ferrum*. It is noteworthy that the languages of ancient Anatolia—the pre-Classical Middle East’s main source of iron—Hittite and Hurrian have yielded a different pair of words *hapalki* and *habalgi* respectively which are clearly cognate with another Akkadian word *habalkinnu*.

Iron was a luxury until the start of the so-called Iron Age, c. 1200 BC. There is however archaeologically attested limited use before, so for example an ivory box from Acemhöyük in southern Turkey, traditionally dated to 18th century BC is decorated with studs of gold, lapis lazuli, and iron (figure 8).

There is an example of a Hebrew term that lacks clear cognates with either Semitic or Indo-European, but where some other surprising cognates are sometimes claimed.

2) Apple

Hebrew *tappuah* ‘apple’ can only be directly related to Egyptian *tpḥ* from which it would seem to have been borrowed. A papyrus of the Egyptian pharaoh Ramesses II (traditionally dated 1279–1213 BC) discloses that the fields of the Delta were full of apples.

Apples (*Malus pumila* derived from the ‘crab apple’ *Malus sylvestris*) are thought to have originated in the southern Caucasus. It is worthy of note that ‘apple’ in the southern Caucasian language Laz *uşkuri* would seem to be cognate with Sumerian *hasilur* (and Akkadian *hasilūru*). These languages are separated by considerable geographical and chronological distance, so perhaps a borrowing from a hitherto unknown intermediate origin would seem likely.

Another pair of related words for ‘apple’ is Hurrian *ḫinzuri* and Armenian *ḫnjor*.

The reconstructed proto-Indo-European word for ‘apple’ **amlu, has given rise to Greek *mēlon*, Latin *mālum* and Gaulish *avallo*. A further oddity is that

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**Figure 6.** Words for ‘wine’ and ‘vine’ in languages of ancient and modern Europe and Asia

**Figure 7.** Words for ‘elephant’ in languages of ancient and modern Europe, Asia and Africa

**Figure 8.** Words for ‘iron’ in languages of ancient and modern Europe and Asia
proto-Indo-European *amlu is clearly related to the proto-
Turkic term *alma, suggesting a common borrowing at the
proto-language phase (figure 9).49

And finally there is an example where different words,
are used at least in part, to differentiate similar but distinct
species.

3) Camel

The Hebrew term for ‘camel’ gāmāl would seem to
designate the one–humped camel, the dromedary, Camelus
dromedarius. It is cognate with the Akkadian gammalu,
which was also used for the two–humped species Camelus
bactrianus.50 Likewise the Greek term kamēlos was also
used for both species.51 A different term was used for the
two–humped Bactrian camel in and around its native habitat
in Iran and Central Asia. Thus Urartian ulti, Armenian ulti,
Late Akkadian udru,52 Avestan uštrō, and Sanskrit uṣṭra.

It is often claimed that there is little evidence for camels
before their supposed domestication in the 12th century BC.
However considerable evidence is now emerging of camels
being used before that date. Among the earliest pieces of
evidence, there is a limestone carving of a camel found some
100 km south of Cairo, from Egypt’s First Dynasty
(traditionally dated to c 3100–2890 BC).53 From Turkmenia
in Central Asia there are Namazga IV period (3000–2600 BC)
models of camels pulling carts.54 Old Babylonian lexical texts
from the 19th–17th centuries BC attest domestication and a
Sumerian text from Nippur dating to the 19th–17th centuries BC
refers to camel’s milk (figure 10).55

Each word has a story

The data available to us is only partial and we cannot
always be sure of the dating of written texts and which way
any given word was borrowed (table 1). However, it cannot
be denied that each word listed above has its own unique
set of cognates and thus historical linguistics enables us,
at least in part, to tell each word’s story. It is certainly too
much to claim that any of the words discussed above are
from the world’s first language, but each story is certainly
worth telling. I hope this study has shown how some stories
are similar to others, and will encourage further speculation
as to why this might be so.

Finally, it is a curious ‘historical accident’ that the reason
why ‘apple’ is often identified as the fruit with which the
serpent tempted Adam and Eve is the fact that malum in the
Latin Vulgate translation of Genesis 3:5 ‘evil’ is, as we have
seen, also the Latin for ‘apple’.56

| Table 1. Direction of borrowing of loan words between language families |
|-----------------|-----------------|-----------------|
| Word (English) | Hebrew word | Proposed original | Direction of borrowing |
| ‘ship’ | oniyāḥ | *nahw | Proto-Indo-European to Semitic |
| ‘gold’ | ḥārūṣ | | Semitic to Indo-European |
| ‘lion’ | lābiy | | Indo-European to Semitic (?) |
| ‘horse’ | sūs | *ek’wos | Proto-North-Caucasian (?) to Proto-Indo-European to Semitic |
| ‘wine’ / ‘vine’ | yayin | *wino | Proto-Kartvelian (?) to Proto-Indo-European to Semitic |
| ‘elephant’ | *hab | *elū | Afro-Asiatic to Semitic to Indo-European |
References

1. Representing the same original word or root.
2. * denotes a reconstructed form, signifying a form does not exist in any written texts.
4. A single example that is an exception to the rule will suffice. Elam (Genesis 10:22) is listed as a son of Shem, but Elamite is a non-Semitic, isolate language.
5. Lewis, M.P., Simons, G.F., and Fennig C.D., Ethnologue, 18th edn, Languages of Africa and Europe, SIL International, Dallas, TX, p. 7, 2015. Classifications may be disputed with some languages no longer being spoken or more technically classed as dialects—"subordinate varieties of a language with non-standard vocabulary".
6. Unless otherwise cited, figures for languages are based on Grimes, B.F., Ethnologue, 14th edn, SIL International, Dallas, TX, 2000.
7. Campbell, L., Historical Linguistics—Introduction, 3rd edn, Edinburgh University Press, Edinburgh, pp. 166, 170, 2013; includes isolates now extinct such as Samerian. Basque, spoken in south-west France and northern Spain, is an often quoted modern example.
8. Campbell, ref. 7, p. 168, which includes language families now extinct.
9. Some linguists however lump family languages together to create macro families such as Nostratic, proposed by Holger Pedersen in 1903, comprising the Indo-European, Altaic, Uralic, Semito-Hamitic, and Eskimo families. This and other proposed macro families are discussed by Pereltsvaig, A., Languages of the World—an Introduction, Cambridge University Press, Cambridge, pp. 218–229, 2012.
12. Gamkrelidze, T.V. and Ivanov, V.V., 16. Waltke, B. and O'Connor, M., 15. Tevfik Esenç, the last speaker of Ubykh, died in Turkey in 1992. The language is of considerable interest to linguists as it has 80 consonants.
13. Pereltsvaig, ref. 9, p. 12.
14. Thus linking with two of Noah’s sons, Ham and Shem.
15. Tveftl Engen, the last speaker of Ubykh, died in Turkey in 1992. The language is of considerable interest to linguists as it has 80 consonants.
18. traces of a ‘sogeval’ system are evident in the French ‘soixante-dix’ = ‘seventy’ and in the older English ‘three score and ten’.
20. ‘Gold’ occurs too in Genesis 2:11 too, but this is the more common word zāhāb.
22. The most common word for ‘gold’ is zāhāb (Genesis 2:12) and elsewhere, a less common word is ketem (Job 18:19) and elsewhere.
23. Gamkrelidze and Ivanov; ref. 21, p. 618.
25. Gamkrelidze and Ivanov; ref. 21, pp. 427–428.
27. Gamkrelidze and Ivanov; ref. 21, p. 463.
31. Drower, M.S., The domestication of the horse; in: Ucko, P.J. and Dimbleby, G.W. (Eds.), The Domestication and Exploitation of Plants and Animals, Duckworth, London, p. 472, 1969. Incidentally it should be noted that an examination of traditional chronology is beyond the remit of this article.