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Global Etymologies

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*If the strength of Indo-European studies
is largely based on the existence,
in a few instances at least,
of very old sources, the strength
of Amerindian studies is simply
the vast number of languages.
Thus synchronic breadth becomes
the source of diachronic depth.*

—Joseph H. Greenberg (1987)

How does one know that two languages are related? Or that two language families are related? Every linguist purports to know the answers to these questions, but the answers vary surprisingly from one linguist to another. And the divergence of views concerning what *is* actually known is even greater than that exhibited on the question of how one *arrives at* this body of information. This is not a particularly satisfactory state of affairs. In what follows we will explore these questions in a global context. We conclude that, despite the generally antipathetic or agnostic stance of most linguists, the case for monogenesis of extant (and attested extinct) languages is quite strong. We will present evidence that we feel can only be explained genetically (i.e. as

the result of common origin), but we will also attempt to answer some of the criticism that has been leveled at work such as ours for over a century.

THE BASIS OF LINGUISTIC TAXONOMY

That ordinary words form the basis of linguistic taxonomy is a direct consequence of the fundamental property of human language, the *arbitrary* relationship between sound and meaning. Since all sequences of sounds are equally well suited to represent any meaning, there is no tendency or predisposition for certain sounds or sound sequences to be associated with certain meanings (leaving aside onomatopoeia, which in any event is irrelevant for classification). In classifying languages genetically we seek, among the available lexical and grammatical formatives, similarities that involve *both* sound and meaning. Typological similarities, involving sound alone or meaning alone, do not yield reliable results.

The fundamental principles of taxonomy are not specific to linguistics, but are, rather, as applicable in fields as disparate as molecular biology, botany, ethnology, and astronomy. When one identifies similarities among molecular structures, plants, human societies, or stars, the origin of such similarities can be explained only by one of three mechanisms: (1) common origin, (2) borrowing, or (3) convergence. To demonstrate that two languages (or language families) are related, it is thus sufficient to show that their shared similarities are not the result of either borrowing or convergence. As regards convergence—the manifestation of motivated or accidental resemblances—linguists are in a more favorable situation than are biologists. In biology, convergence may be accidental, but is more often motivated by the environment; it is not by accident that bats resemble birds, or that dolphins resemble fish. In linguistics, by contrast, where the sound/meaning association is arbitrary, convergence is *always* accidental.

It is seldom emphasized that similarities between language *families* are themselves susceptible to the same three explanations. That we so seldom see mention of this corollary principle is largely because twentieth-century historical linguistics has been laboring under the delusion that language families like Indo-European share *no* cognates with other families, thus offering nothing to compare. At this level, it is alleged, similarities simply do not exist.

What is striking is that this position—for which considerable evidence to the contrary existed already at the start of this century (Trombetti 1905) and which on a priori grounds seems most unlikely (Ruhlen 1988a)—came to be almost universally accepted by linguists, most of whom have never investigated the question themselves. Those few scholars who have actually investigated the question, such as Trombetti (1905), Swadesh (1960), and Greenberg

(1987), have tended to favor monogenesis of extant languages. Even Edward Sapir, often considered an exemplar of linguistic sobriety (despite his alleged excesses in the Americas), looked favorably upon the work of Trombetti, as seen in a letter to Kroeber in 1924: "There is much excellent material and good sense in Trombetti in spite of his being a frenzied monogenist. I am not so sure that his standpoint is less sound than the usual 'conservative' one" (quoted in Golla 1984: 420). We maintain that a comparison of the world's language families *without preconception* reveals numerous widespread elements that can only be reasonably explained as the result of common origin.

BORROWING

Linguists employ a number of well-known techniques to distinguish borrowed words from inherited items. Most important, clearly, is the fact that basic vocabulary, as defined by Dolgopolsky (1964) and others, is highly resistant to borrowing. Though it is no doubt true that *any* word may on occasion be borrowed by one language from another, it is equally true that such basic items as pronouns and body parts are rarely borrowed. Furthermore, borrowing takes place between two languages, at a particular time and place, not between language families, across broad expanses of time and place. Thus to attribute the global similarities we document here to borrowing would be ludicrous. And as regards the alleged cases of *mass* borrowing in the Americas (the so-called "Pan-Americanisms"), Greenberg (1990: 11) quite rightly protests "that basic words and pronouns could be borrowed from Tierra del Fuego to British Columbia . . . is so utterly improbable that it hardly needs discussion." It seems to us even less likely that basic vocabulary—the grist for most of the etymologies we offer herein—could have been borrowed from one language to another all the way from Africa across Eurasia to South America.

CONVERGENCE

A common criticism of work like ours is that, with around 5,000 languages to choose from, it cannot be too hard to find a word in some African language that is semantically and phonologically similar to, or even identical with, some word in an American Indian language.[1] There are so many possibilities, runs this argument, that one can hardly fail to find accidental "lookalikes" everywhere (Goddard 1979, Campbell 1988). But this sort of mindless search is exactly the reverse of how the comparative method proceeds. The units we are comparing are *language families*, not individual languages (a language isolate like Basque has traditionally been considered, taxonomically,

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[1] For a more fundamental discussion of convergence, see Chapter 2.

a family consisting of a single language). Specifically, we will be comparing items in the following 32 taxa, each of which we believe is a genetically valid group at some level of the classification: Khoisan, Niger-Congo, Kordofanian, Nilo-Saharan, Afro-Asiatic, Kartvelian, Indo-European, Uralic, Dravidian, Turkic, Mongolian, Tungus, Korean, Japanese-Ryukyuan, Ainu, Gilyak, Chukchi-Kamchatkan, Eskimo-Aleut, Caucasian, Basque, Burushaski, Yeniseian, Sino-Tibetan, Na-Dene, Indo-Pacific, Australian, Nahali, Austroasiatic, Miao-Yao, Daic (= Kadai), Austronesian, and Amerind.

One may legitimately wonder why, for the most part, we are comparing relatively low-level families like Indo-European and Sino-Tibetan rather than higher-level taxa like Eurasiatic/Nostratic and Dene-Caucasian, especially since both of us support the validity of these higher-level families (Bengtson 1991a,b, Ruhlen 1990a). We do this to emphasize that higher-level groupings do not require the prior working out of all the intermediate nodes, contrary to the opinion of most Amerindian specialists (the field is all but bereft of generalists!). As is well known, both Indo-European and Austronesian were recognized as families from the early years of their investigation, long before specialists had reconstructed all their intermediate levels (a task that is, of course, still incomplete). In taxonomy it is a commonplace that higher-level groupings are often more obvious—and easier to demonstrate—than are lower-level nodes. We maintain that this is particularly so when one considers the entire world. Current contrary opinion notwithstanding, it is really fairly simple to show that all the world's language families are related, as we shall see in the etymologies that follow. Discovering the correct intermediate groupings of the tree—the subgrouping of the entire human family—is a much more difficult task, and one that has only begun. Exactly the same is true of Amerind, which itself is a well-defined taxon (Greenberg 1987, Ruhlen 1991a); the subgrouping *within* Amerind involves far more difficult analyses and taxonomic decisions (Ruhlen 1991c).

Each of our 32 genetic groups is defined by a set of etymologies that connects grammatical and lexical items presumed to be cognate within that group; the postulated membership and putative subgrouping within each of these groups is given in Ruhlen (1987a). The precise number of etymologies defining each of the 32 groups ranges from several thousand (for close-knit and/or well-documented groups like Dravidian or Indo-European) to several dozen (for ancient and/or poorly studied groups like Indo-Pacific or Australian). For the most part the many etymologies defining each group have been discovered independently, by different scholars. (In this regard Greenberg's work—in Africa, New Guinea, and the Americas—represents an exception to the rule.) So instead of drawing our etymologies from thousands of *languages*, each containing thousands of words, we are, rather, limited to less

than three-dozen *families,* some of which have no more than a few hundred identifiable cognates. The pool of possibilities is thus greatly reduced, and accidental look-alikes will be few.

We believe that the failure of our critics to appreciate the truly minuscule probability of accidental similarities is the chief impediment to their understanding why all the world's languages must derive from a common origin. Accordingly, let us consider this question in some detail. Each of the etymologies we cite involves at least a half-dozen of the 32 supposedly independent families, precisely because the probability of finding the same accidental resemblance in six different families is close to zero. The multiplication of the (im)probabilities of accidental resemblance, as more and more families are considered, quickly assures the attentive taxonomist that similarities shared by numerous families, often separated by vast distances, cannot be due to chance. This crucial point has been emphasized by Collinder (1949), Greenberg (1957, 1963, 1987), and Dolgopolsky (1964), among others, but even Trombetti (1905) was well aware of the statistical importance of attestation in multiple families, rather than in just two. The biologist Richard Dawkins (1987: 274) makes the same point: "Convergent evolution is really a special kind of coincidence. The thing about coincidences is that, even if they happen once, they are far less likely to happen twice. And even less likely to happen three times. By taking more and more separate protein molecules, we can all but eliminate coincidence."

To see just how unlikely accidental look-alikes really are, let us consider two languages that each have just seven consonants and three vowels:

p	t	k		i	u
	s				a
m	n				
	l				

With a few notable exceptions the vast majority of the world's languages show at least these phonological distinctions. Yet even this minimal inventory is capable of producing 147 CVC roots, as shown in Table 5. The probability of accidental phonological *identity* is only 1/147, though the probability of accidental phonological *resemblance* might be 2/147, 3/147, etc., depending on how many other phonological shapes in Table 5 are deemed sufficiently similar. A perusal of Table 5 suggests, however, that most of these putative roots are quite distinct phonologically and are not readily connected by common phonological processes.

TABLE 5 Possible CVC Roots for a Language with Seven Consonants and Three Vowels

KAK	LAK	MAK	NAK	PAK	SAK	TAK
KAL	LAL	MAL	NAL	PAL	SAL	TAL
KAM	LAM	MAM	NAM	PAM	SAM	TAM
KAN	LAN	MAN	NAN	PAN	SAN	TAN
KAP	LAP	MAP	NAP	PAP	SAP	TAP
KAS	LAS	MAS	NAS	PAS	SAS	TAS
KAT	LAT	MAT	NAT	PAT	SAT	TAT
KIK	LIK	MIK	NIK	PIK	SIK	TIK
KIL	LIL	MIL	NIL	PIL	SIL	TIL
KIM	LIM	MIM	NIM	PIM	SIM	TIM
KIN	LIN	MIN	NIN	PIN	SIN	TIN
KIP	LIP	MIP	NIP	PIP	SIP	TIP
KIS	LIS	MIS	NIS	PIS	SIS	TIS
KIT	LIT	MIT	NIT	PIT	SIT	TIT
KUK	LUK	MUK	NUK	PUK	SUK	TUK
KUL	LUL	MUL	NUL	PUL	SUL	TUL
KUM	LUM	MUM	NUM	PUM	SUM	TUM
KUN	LUN	MUN	NUN	PUN	SUN	TUN
KUP	LUP	MUP	NUP	PUP	SUP	TUP
KUS	LUS	MUS	NUS	PUS	SUS	TUS
KUT	LUT	MUT	NUT	PUT	SUT	TUT

Now were we to compare two languages with a more typical phonemic inventory, say, fourteen consonants and five vowels,

p	t	k		j	w	i	u
b	d	g				e	o
	č						a
	s						
m	n						
	l						
	r						

we would find that the number of possible CVC roots in each language jumps to 980. Again, of course, the probability of chance resemblance will depend on certain phonological assumptions, but precious few accidental identities *or* resemblances, vis-à-vis the stock of some other language or group of languages, could be expected.

One may appreciate just how unlikely an explanation of chance resemblance —independent development in each family—really is by considering the prob-

ability that the resemblances noted in etymology 21 (below) arose by convergence. We have chosen this etymology for our argument because the meaning involved is rarely borrowed and has no onomatopoeic connections. It thus offers a clear case, where the similarities must be due either to common origin or to accidental convergence. Let us try to calculate the probability that these similarities arose independently. To do this we must make certain assumptions, and at each such stage we shall adopt a minimalist approach that in fact underestimates the true probability. Let us assume, as we did above, that each language family uses only seven consonants and three vowels, yielding the 147 syllable types shown in Table 5. What, then, is the probability that two languages will accidentally match for a particular semantic/phonological domain, in the present case 'female genitalia'? Clearly it is 1/147 or .007. Whatever the form that appears in the first language family, the second family has only one chance in 147 of matching it. And the probability that a third family will offer a match will be $(1/147)^2$ or .000049; that of a fourth family, $(1/147)^3$ or .0000003; and so forth. In the etymology we give, 14 of the 32 taxa show apparent cognates, though the evidence is for the moment slim in Australian and the vowel in Austronesian (and many Amerind forms) is *e* rather than the expected *u*. But if we ignore these details, then the probability that the particular sound/meaning correlation "PUT/female genitals" arose independently *fourteen times* will be $(1/147)^{13}$, or about one chance in ten octillion, by our rough calculations. We feel that this qualifies as a long shot; certainly descent from a common source is the more likely explanation.

The foregoing constitutes what we consider to be the basis of genetic classification in linguistics. The application of these basic principles to the world's language families leads inevitably, in our opinion, to the conclusion that they all derive from a single source, as suggested by the 27 etymologies presented below. We have not yet dealt, however, with a number of other topics that in the minds of many linguists are inextricably tied up with taxonomy, questions like reconstruction, sound correspondences, and the like. We believe that these topics are not in fact of crucial importance in linguistic taxonomy, and that mixing the basic taxonomic principles with these other factors has led to much of the current confusion that we see concerning the classification of the world's languages. So that these anciary topics not be invoked yet again, by those opposed to global comparisons, we will take them up one by one and explain why they are not relevant to our enterprise. Let us begin with a topic that is at the heart of many current disputes, the alleged incompatibility between Greenberg's method of multilateral comparison and the traditional methods of comparative linguistics.

MULTILATERAL COMPARISON VS. THE TRADITIONAL METHOD

Many linguists feel that Greenberg's use of what he calls multilateral comparison to classify languages in various parts of the world is incompatible with—or even antagonistic to—the methods of traditional historical linguistics, which emphasize reconstruction and sound correspondences (about which, see below). Thus, Bynon (1977: 271) claims that "the use of basic vocabulary comparison not simply as a *preliminary* to reconstruction but as a *substitute* for it is more controversial. . . . Traditional historical linguists . . . have not been slow in pointing out the inaccuracies which are bound to result from a reliance on mere similarity of form assessed intuitively and unsubstantiated by reconstruction." In a similar vein, Anna Morpurgo Davies (1989: 167) objects that "we do not yet know whether superfamilies outlined in this way have the same properties as families established with the standard comparative method. If they do not, there is a serious risk that the whole concept of superfamily is vacuous." And Derbyshire and Pullum (1991: 13) find Greenberg's Amerind hypothesis "startling, to say the least, when judged in terms of the standard methodology . . . ."

The confusion displayed in the previous three quotes (and one could give many others) results from a failure to realize that the comparative method consists essentially of two stages. The first stage is *classification,* which is really no different from what Greenberg calls multilateral comparison. The second stage, which might be called *historical linguistics,* involves family-internal questions such as sound correspondences and reconstruction. In practice, there is no name for this second stage simply because the two stages are seldom distinguished in the basic handbooks on historical linguistics, in which, almost without exception, the initial stage, classification, is overlooked (Bynon 1977, Hock 1986, Anttila 1989). Also overlooked in these basic texts are language families other than Indo-European. The origin of this anomaly—which knows no parallel in the biological world—is a consequence of the primogeniture of Indo-European in the pantheon of identified families, and the subsequent elaboration of the family by Europeans in the nineteenth century.

That the initial stage of comparative linguistics, classification, is so systematically overlooked today lies in the origin of the Indo-European concept itself. When Sir William Jones announced in 1786 that Sanskrit, Greek, and Latin—and probably Gothic and Celtic as well—had all "sprung from some common source," he essentially resolved the first stage of comparative linguistics at the outset: he identified five branches of Indo-European and hypothesized that all five were altered later forms of a single language that no longer existed. What was left unstated in Jones's historic formulation was the fact that languages such as Arabic, Hebrew, and Turkish—languages that Jones knew well—were

excluded from his Indo-European family.[2] For Indo-European, and for the Indo-Europeanists who came to dominate historical linguistics, the problem of classification was essentially resolved by Jones, and the later additions of a few more obvious branches, such as Tocharian and Anatolian, did not alter this state of affairs.

The problems that Greenberg confronted, however, when he set out to classify the languages of Africa, were quite different from those facing a historical linguist investigating an already-defined family. Greenberg was confronted by over 1,000 languages, only some of which fit into well-defined families (e.g. Semitic, Bantu), and among which there was little understanding of the relationships. Under these circumstances, where does one start? Obviously the only way to begin is by the comparison of basic lexical items and grammatical formatives in *all* the languages, which inevitably leads to a classification of the languages into a certain number of groups defined by recurring similarities. This is exactly what Jones had done when he identified Indo-European, stressing, as he did, "a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident." He said nothing of sound correspondences or reconstruction, for in fact these concepts came to prominence (despite the earlier work of Rask, Grimm, and Bopp) only in the second half of the nineteenth century.

We believe, in short, that there is really no conflict between Greenberg's method of classifying languages and what is often referred to rather inexplicitly as "the standard methodology." The standard methodology is used to investigate family-internal problems; it does not—at least as it is explained in the basic textbooks referred to above—tell one how to identify language families. Accordingly, it does not tell one how to classify the world's languages. This, rather, is what Greenberg's work does, and it is, furthermore, how Greenberg views what he does. It has recently been alleged that he himself subscribes to the view that his methods differ from the standard methodology: "Greenberg (1987) makes clear that he believes such groupings [as Altaic, Hokan, and Amerind] cannot be reached by the standard comparative method; a wholly different method, MASS COMPARISON, is required" (Nichols 1990: 477). That this is, in fact, exactly the opposite of Greenberg's views is shown in the following:

Statements from certain American Indianists that I have rejected comparative linguistics and have invented a new unorthodox method called mass or multilateral comparison are repeated again and again in the press. However, as I clearly stated in Greenberg (1987: 3), once we have a well-established stock I go about comparing and reconstructing just like anyone else, as can be seen in my various contributions to historical linguistics. However, as I pointed out long ago in regard to my generally accepted African classification, the first step has to be to look very broadly,

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[2] The term Indo-European was not introduced until the nineteenth century.

on at least a continent-wide scale, to see what the obvious groupings are. How can one start to apply the comparative method until one knows what to compare? (Greenberg 1990: 8)

RECONSTRUCTION

It is remarkable how frequently reconstruction is confounded with taxonomy. For a moment's reflection should make it clear that one can only begin reconstructing a proto-language *after* one has decided which languages belong to the putative family. Until one has delineated a set of seemingly related languages, collectively distinct from all others, by the methods outlined at the outset of this chapter, there is simply nothing to reconstruct. (After the fact, of course, reconstruction and (re)classification may enjoy a fruitful feedback.) And as for the supposed validating effect of reconstruction, would anybody claim that a bad reconstruction invalidates a well-defined family such as Indo-European? Or that a brilliant reconstruction could show that Slavic, Ob-Ugric, and Basque form a valid family? As a process, reconstruction is entirely different from taxonomy, and the two should not be confused. It is for this reason that Bynon's claim that Greenberg uses multilateral comparison as a "substitute" for reconstruction really makes no sense, and it is certainly not anything that Greenberg has ever written or said or even suggested.

SOUND CORRESPONDENCES

Perhaps the greatest source of confusion in recent taxonomic debates has been the role that sound correspondences, for example Grimm's Law, play in classification. It is clear that many historical linguists see regular sound correspondences as playing some crucial role in identifying valid linguistic taxa. In reality, sound correspondences are discovered only *after* a linguistic family has been identified, for the simple reason that sound correspondences are properties of particular linguistic families. They are not—and could not be—a technique for discovering families. When the Indo-European sound correspondences were worked out in the nineteenth century, not for a minute did any of the Indo-Europeanists imagine that they were "proving" Indo-European, the validity of which had not been in doubt for decades.

There are several reasons why sound correspondences have become enmeshed with taxonomic questions. First, it is sometimes alleged that it is only by means of regular sound correspondences that borrowings can be discriminated from true cognates. It has long been recognized, however, that loanwords often obey regular sound correspondences as strictly as do true cognates, a point emphasized on several occasions by Greenberg (1957, 1987). Campbell (1986: 224) makes the same point: "It ought to be noted that such

agreements among sounds frequently recur in a number of borrowed forms, mimicking recurrent sound correspondences of true cognates."

Another alleged use of sound correspondences is to discriminate superficial look-alikes from true cognates (see the quote by Bynon above), and cognates, it is claimed, do not look alike and can only be recognized by means of sound correspondences. Thus, the commonly accepted Indo-European sound correspondences show that Armenian *erku* '2' and Latin *duo* '2' are cognate, despite their different form, whereas English bad and Farsi *bad* are not cognate, despite their identity of form. Campbell has aptly criticized such views:

Identical or very similar sound matchings do not necessarily imply loans or weak evidence of genetic connection. . . . With a time depth approaching that of the Indo-European languages of Europe, the Mayan correspondences are on the whole identical or are the result of single natural and recurrent changes. Proto-Mayan **p, *m, *n,* and **y* are reflected unchanged, with identical correspondences, in all of the over thirty Mayan languages. All other correspondences are very similar. Even English, after its many changes, reflects Proto-Indo-European **r, *l, *m, *n, *s, *w,* and **y* unchanged, on the whole.

A quick survey of once-disputed but now established remote genetic relationships reveals that identical (or very similar) sound correspondences are not that unusual . . . .

Therefore, identical correspondences should not be shunned nor too speedily attributed to borrowing. While longer separation may provide greater opportunity for unusual and exotic correspondences to develop in cases of distant genetic relationship, it is in no way necessary for such developments to have taken place nor for correspondences to be non-identical" (1986: 221–23).

Indeed, when one looks at the reconstructions that have been proposed for almost any family, one is able to find modern languages that preserve the proposed ancestral forms virtually unchanged. To cite just a few examples, Proto-Indo-European **nēpot-* 'nephew, son-in-law' is strikingly similar to modern Rumanian *nepot,* and Proto-Indo-European **mūs* 'mouse' was preserved without change in Latin, Old English, and Sanskrit. Proto-Austronesian **sepat* '2' is almost identical with Rukai *sepate,* and Proto-Autronesian **mat^sa* 'eye' is identical with Rukai *mat^sa.* Proto-Uralic **tule* 'fire' is preserved in Finnish *tule-,* and Proto-Uralic **mośka* 'to wash' differs little from Estonian *mõske-.* At an even greater time depth, we find that Proto-Nostratic **nato* 'female relation by marriage' has survived, in Uralic, as Finnish *nato* 'husband's or wife's sister' and, in Dravidian, as Malayalam *nāttūn* 'husband's sister, brother's wife,' while Proto-Nostratic **pʰalV* 'tooth' survives in Dravidian as Telugu *palu* and in Altaic as Ulch *palu.* At a time depth perhaps even greater than that of Nostratic, we find Proto-Australian **buŋku* 'knee' preserved in Dyirbal *buŋku.*

In the etymologies we present below, connecting all of the world's language families, the situation is not all that different from that within the families

just discussed. There are, in fact, many examples of sound correspondences of the transparent variety discussed by Campbell. This initial stage of the analysis is necessarily characterized by the identification of easily recognizable similarities, just as was the discovery of Indo-European or any other family. The refinement represented by exotic sound correspondences of the *erku–duo* variety inevitably awaits a later stage in the analysis—the second stage, which we have called "historical linguistics." And it is important to recognize that the work of this stage leads almost invariably to a refinement of the *etymologies,* rather than a refinement of the *classification.*

Among the world's language families, there are no doubt exotic sound correspondences as well that we have not detected. It should be noted, nevertheless, that as early as 1986 one of us (Bengtson) proposed some global sound correspondences, and the Russian scholar Sergei Starostin (1991) has recently published the most explicit statement of interphyletic sound correspondences to date. His brief table of Nostratic–Dene-Caucasian correspondences, though not quite global in scope, accounts for a vast expanse of the linguistic world. Nostratic, for Starostin, includes ten of our 32 taxa (Kartvelian, Indo-European, Uralic, Dravidian, Turkic, Mongolian, Tungus, Korean, Japanese-Ryukyuan, and Eskimo-Aleut), and Dene-Caucasian, for Starostin, includes Caucasian, Sino-Tibetan, Yeniseian, and Na-Dene—to which one may confidently add both Basque and Burushaski (Bengtson 1991a,b). Thus, Starostin's equations account for roughly half of our 32 taxa, as well as the vast majority of the Eurasian land mass. We find nothing in Starostin's correspondences that is inconsistent with the etymologies proposed below.

ON THE LIMITS OF THE COMPARATIVE METHOD

It has recently been widely asserted that the comparative method in linguistics produces reliable results only for the past 5,000–10,000 years. According to Kaufman (1990: 23), "A temporal ceiling of 7,000 to 8,000 years is inherent in the methods of comparative linguistic reconstruction. We can recover genetic relationships that are that old, but probably no earlier than that. The methods possibly will be expanded, but for the moment we have to operate within that limit in drawing inferences." Similar statements from a host of other scholars are given in Chapter 11, where such beliefs are identified as the central myth of historical linguistics (Chapter 13 further analyzes such myths). The origin of this myth, we believe, is an attempt by Indo-Europeanists to "explain" why Indo-European has no known genetic connections—in our view yet another myth. The fact that Indo-European is intimately connected with numerous other families has been demonstrated beyond a reasonable doubt by the Russian Nostraticists (Illich-Svitych 1971–84), a demonstration that is complemented and extended by Greenberg (to appear).

We have shown that in numerous cases sounds (particularly stable ones like nasal consonants and liquids)—and even entire words—have persisted over time spans greater than 8,000 years virtually unchanged. This raises the question why these evidently quite stable sounds must suddenly change beyond recognition, or disappear entirely, beyond the supposedly insuperable threshold of 10,000 years. If we can use modern languages to reconstruct proto-languages that existed at least 6,000–8,000 years ago (e.g. Proto-Indo-European, Proto-Uralic, Proto-Dravidian, Proto-Austronesian), why cannot such earlier languages themselves be compared (as in fact we will do) in order to discern still earlier groupings? Would it not be one of the more remarkable coincidences in the history of science if Indo-European, the family in terms of which comparative linguistics was discovered, turned out to define the temporal limit of comparative linguistics as well? That there is no such coincidence is amply demonstrated in the etymologies we give below. We feel it is time for linguists to stop selling the comparative method short and to apply it consistently to the world's linguistic taxa, *without preconception.* The present chapter represents a step in this direction, an initial step that shows that all of the world's populations are linguistically connected. The culmination of these efforts will be a comprehensive subgrouping of this single linguistic family.

BAD SEMANTICS

Another criticism of global etymologies in particular, and of long-range comparison in general, is that such liberties are taken with semantic change that literally anything can be connected with anything else, and it is certainly true that many global etymologies proposed over the years have been semantically unconvincing. But for just that reason we have constrained the semantic variation of each etymology very tightly, and few of the semantic connections we propose would raise an eyebrow if encountered in any of the standard etymological dictionaries. They are in fact semantically more conservative than many proposed connections in Pokorny (1959), the standard Indo-European etymological dictionary. Whatever damage this often alleged defect may have done to earlier programs of long-range comparison, we believe that it does not affect the etymologies presented below.

ERRORS IN THE DATA

Another often-cited criticism of long-range comparison is the presence of errors in the data, errors that invalidate the overall hypothesis. This is a specious argument, for it ignores both common sense and the standard measures of statistical significance. Genetic classification is not analogous to a mathematical proof, wherein one false step undermines the complete demon-

stration. Rather, the cumulative weight of all the evidence completely swamps the effects of whatever random errors may be scattered through the work. As Greenberg has often stressed—and has in fact shown in his work—multilateral comparison yields valid genetic classifications even from decidedly degenerate data. An example was Greenberg's classification of Australian languages in 1953, using little more than the vocabularies published by E. M. Curr in 1886–87. The notion that data must be pristine and copious flies in the face of commonly accepted historical method. It is all well and good for Kaufman (1990: 18) to demand at least 500 items of basic vocabulary and 100 points of grammar before "serious comparative work" can be carried out, but the fact remains that Indo-Europeanists have classified Lydian as Indo-European, without dissent, on the basis of a handful of words, as noted by Greenberg (1990: 10). Similarly, David Payne (1991: 362) reports that "all that remains of the [Shebayo] language is a vocabulary list of fifteen words collected at the end of the 17th century. . . . Despite the paucity of data from this language, it is quite clear that it is Arawakan." Historians and historical linguists—not to mention paleontologists working from handfuls of bashed fossils—use whatever material is available; they do not demand that the evidence be complete or immaculate.

DISTRIBUTIONAL DIFFERENCES

It is often alleged that one can find anything in linguistic data if one looks for it hard enough. Thus the global etymologies we present below are a tribute more to our industry and enterprise than to real genetic connections. Such a view is widespread among linguists who have never actually compared large numbers of languages (or language families), but those of us who *have* done this kind of work know the reverse to be true. "Wanting" to find something is of very little help if it is not there. Greenberg (1987) points out that the Amerind family has two general words for females, TUNA 'girl' and KUNA 'woman.' Both roots are abundantly attested throughout North and South America, and both are found in all eleven branches of the Amerind family. What is interesting about their distribution, however, is that whereas KUNA is widely attested in the Old World, as we show in etymology 11 below, we have found no trace of TUNA in the Old World. If it were really so easy to find anything one looks for, why did we fail to find TUNA in the roughly 4,500 Old World languages, when it is so readily observed in the approximately 500 New World languages? The evolutionary analysis provides a simple and natural explanation: when the Amerind forebears first entered the New World they brought with them the word KUNA 'woman,' and only later did they invent the word TUNA 'girl.' That there is no trace of TUNA 'girl' in the Old World is because it never existed there.

GLOBAL ETYMOLOGIES

For each etymology, in what follows, we present a phonetic and semantic gloss,[3] followed by examples from different language families. Though we have not attempted to present a unified phonetic transcription for all sources, we *have* adjusted certain transcriptions from time to time to avoid potential ambiguity. In the first etymology (but not elsewhere) yod has been normalized to j in all citations. Ejectives have been normalized to p', t', k', etc.; V represents a vowel of indeterminate timbre; ǐ is used for the Old Church Slavic soft sign and ǔ for the hard sign; and $\sim$ separates alternative forms. In the two interrogative etymologies (10, 17), interrogative and relative uses are not distinguished ('who?' as in "Who is that man?" vs. 'who' in "The man who came to dinner."). The intimate connection between the two is well known and uncontroversial. Most of the cited forms are, however, true interrogatives.

The source of the information for each family represented in a given entry is indicated by an abbreviation in brackets at the end of the entry. The number following the abbreviation is either the etymology number in the original source (if there is one) or the page number there. Since the existence of these roots as characteristic features of the language families cited has already been established by other scholars, and is not for the most part in question, we do not give the complete documentation for each family, limiting ourselves in most instances to an indication of the range of semantic and phonological variation within the family. The reader who wishes to see every relevant form for a given family should consult the sources cited. For Amerind, however, we give extensive citations, in order to counterbalance the fallacious criticism that has been directed at Greenberg's work. Parts of etymologies that are problematic, by dint of either phonetic or semantic divergence, or by restricted distribution, are preceded by a question mark. The lack of a semantic gloss following a form means that that form has the same meaning as the preceding form.

We make no claim to being the first to discover any of the etymologies listed below. The pioneering work of Trombetti, Swadesh, Greenberg, Illich-Svitych, Dolgopolsky, and Starostin has identified numerous widespread roots. What we *have* tried to do is to make each etymology more complete and more soundly documented in this incarnation than it may have been in previous ones. With this goal in mind we have weeded out certain families from pre-

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[3] We do not deal here with reconstruction, and these glosses are intended merely to characterize the most general meaning and phonological shape of each root. Future work on reconstruction will no doubt discover cases where the most widespread meaning or shape was not original.

vious proposals, where the root was phonologically or semantically too divergent, or too weakly attested, to be convincing. But we believe we have also uncovered some additional etymological connections that had previously gone unnoticed. To a very great extent the recognition of these similarities has been made possible by the lower-level classificatory work of Greenberg in Africa, the New Guinea area, and the Americas, and by that of Russian scholars on Kartvelian, Caucasian, and other families of the former Soviet Union. Before all this work appeared, in recent decades, it was difficult, if not impossible, for a taxonomist to be sure that a root was truly diagnostic of some family, simply because there was no understanding of what the valid genetic families were, much less what cognates defined them. Trombetti, for example, dealt in terms of languages only where he was forced to by a lack of any general overall classification. Wherever possible, he worked with established language families (e.g. Indo-European, Uralic, Bantu), since he was well aware of the unavoidable methodological quandary presented by poorly documented families.

We harbor no illusions, of course, that every etymological connection we propose will be found, ultimately, to be correct, but we do believe that the removal of such errors as may exist in these etymologies will not seriously affect the basic hypothesis, which does not depend on any specific link for its validity. Furthermore, the number of widespread etymologies can be vastly increased over the fragment we present here. In the long run we expect the evidence for monogenesis of extant languages to become so compelling that the question will be not whether all the world's languages are related, but why it took the linguistic community so long to recognize this obvious fact.

1 AJA 'mother, older female relative'

KHOISAN: ≠Au.//eî *ai* 'female, mother,' !Kung *ʔai* 'mother'; Naron *ai*, Hadza *aija* ∼ *aijako* 'mother, grandmother, aunt'; /'Auni *aija* 'mother.' [BD 6]

NIGER-CONGO: Temne *-ja* 'mother,' Bulom *ja*, Yoruba *ija*; Bantu: Proto-Bantu *jíjà* ∼ *jíjò*. [BA IV: 190]

NILO-SAHARAN: Saharan: Daza *aja* 'mother,' Kanembu *jia* ∼ *ja*, Kanuri *ja*; Fur *ija*; Maban: Runga *ja*; Koman: Gumuz *ijo*; Central Sudanic: Mangbetu *aja*, Madi *ia*, Lombi *jaija*; East Sudanic: Gulfan *aja*, Midob *ija*, Suk *iju*, Nyangiya *joijao* 'thy mother.' [NS 95, CN 67, ES 77, NSD 43]

AFRO-ASIATIC: Omotic: Wolamo *ajē* 'mother'; Cushitic: Oromo *ajo*, Somali *hoojo*; Chadic: Kotoko *īja* ∼ *ija* ∼ *ja*, Mubi *íjà*. [WM 64]

DRAVIDIAN: Tamil *āj* ∼ *ãji* ∼ *jaj* 'mother,' *ājāḷ* 'mother, grandmother,' Kannada *āji* 'mother,' Kolami *aj*, Parji *ajal* 'woman, wife,' *ija* 'mother,' Gadba *aja* 'mother,' *ajal* 'woman, wife,' Gondi *ajal* 'mother,' Konda *aja*, Pengo

aja ∼ ija, Manda aja, Kui aia ∼ aja ∼ ija, Kuwi īja 'mother,' aja 'woman,'
Kurux ajaŋg ∼ ajo 'mother,' Malto aja 'my mother.' [D 364, NSD 43]

BURUSHASKI -ʌi 'daughter, girl.' [B 455]

?INDO-PACIFIC: Isabi aijo 'mother,' Korafe aja. [FS 99]

NAHALI aji 'husband's younger sister.' [NA 59]

AUSTROASIATIC: Munda: Sora ajaŋ-tsɔr 'bitch' (= female-dog, cf. kin-tsɔr
'male dog'); Mon-Khmer: Proto-Mon-Khmer *jaʔ 'grandmother.' [PB 482,
SB 34]

MIAO-YAO: Proto-Yao *ja 'father's sister.' [PB 339]

DAIC: Tai: Proto-Tai *ja 'father's mother'; Sek ja; Kam-Sui: Proto-Kam-
Sui *ja 'grandmother,' Sui ja 'grandmother, old woman'; Li: Proto-Li *ja
'mother, grandmother,' Small Cloth Loi ja 'mother'; Lakkia jə 'grand-
mother.' [PB 339]

AUSTRONESIAN: Proto-Austronesian *ʻajah 'father,' Atayal jajaʔ 'mother,'
Pazeh jah 'older sister,' Malay 'ajah 'father,' Javanese (j)ajah 'father.'
[AN 13, WW 74, PB 339]

AMERIND: Penutian: North Sahaptin ájaD 'woman,' Nez Perce ʔajat, Tzotzil
jaja 'grandmother'; Hokan: Washo -ja 'paternal aunt,' Quinigua ʔjaak,
Tonkawa ʔejan 'woman's sister'; Central Amerind: Tewa jia 'mother,'
Proto-Oto-Manguean *ja 'female,' Proto-Uto-Aztecan *je 'mother,' Tara-
humara ije, Yaqui ʔaije, Nahua -jeʔ; Chibchan-Paezan: Xinca aja 'woman,'
Matagalpa joaja, Cuna jaa-kwa 'young woman,' Colorado aja 'mother';
Andean: Ona joj 'grandmother,' Auca -jæ̃jæ̃; Macro-Tucanoan: Amaguaje
ajo 'old woman,' Masaka jaja 'older sister,' Ticuna jake 'old woman';
Equatorial: Mapidiana aja 'aunt,' Tora ije 'paternal grandmother,' Arikem
haja 'aunt'; Macro-Panoan: Mayoruna jaja, Shipibo jaja 'paternal aunt,'
Moseten eje 'grandmother,' jaja 'mother-in-law'; Macro-Carib: Accawai
aja 'mother'; Macro-Ge: Coropo ajan, Coroado ajan, Palmas jã. [CA 55,
AMN]

2 BU(N)KA 'knee, to bend'

NIGER-CONGO: Baga -buŋ 'knee,' Pajade -paŋ, ?Lefana -ŋko; Bantu: Proto-
Bantu *bóŋgó, Swahili bong'oa 'to stoop, bend down.' [BA III: 57]

KORDOFANIAN: Tegele mbo 'knee' (pl. aboan ∼ abuaŋ). [VB]

AFRO-ASIATIC: Omotic: Dime boq 'knee,' Bako boɣa, Basketo buḳa, Oyde
bunḳe; Chadic: Fyer fuŋ 'knee,' Bura ḅunji 'knee.' [VB]

INDO-EUROPEAN: Proto-Indo-European *bheug(h) 'to bend'; Indic: Sanskrit
bhugná 'bent'; Germanic: Gothic biugan 'to bend,' Old Icelandic bogenn
'bent,' English bow, elbow; Celtic: Proto-Celtic *buggo 'flexible, mal-
leable,' Irish bog 'soft'; Albanian butë (< bhug(h)-to) 'soft'; Baltic: Lat-
vian baũgurs 'hill, rising ground.' [IE 152, N 25]

Turkic: Proto-Turkic *bük(ä) ∼ *bök(ä) 'to bend,' Chuvash pĕk ∼ pŏk 'to bend,' Yakut bük, Khakas bükri 'bent,' Old Uighur bük ∼ bök 'to twist,' Uighur bük ∼ bök 'to kneel.' [N 25]

Mongolian: Proto-Mongolian *böke 'to bend,' Written Mongolian bökeji ∼ bököji 'to cave in, sag' böken 'hump of a camel,' bökötür 'bent,' Khalkha bȯx(ȯn) 'hump of a camel,' Kalmyk bȯkṇ 'hump, humped.' [N 25]

Tungus: Proto-Tungus *bök(ä) 'to bend,' Manchu buk(-da), Nanai bukun 'hump,' Evenki bukä 'to bow,' buku 'bent, crooked,' bäkä 'hump.' [N 25]

Ainu he-poki-ki 'bow down,' he-poki-poki 'to nod the head.'

Indo-Pacific: Halmahera: Tobelo buku 'knee,' Modole bubuqu, Loda wuwuku; Bougainville: Koianu poku; South New Guinea: Teri Kawalsch bugu; Northeast New Guinea: Saker bakbakan. [IP 43]

Australian: Proto-Australian *puŋku 'knee,' Tyeraity böŋgöl, Maranunggu biŋgar, Guugu Yimidhir buŋgu, Kok-Nar poŋk ∼ púŋkuwál, Gugu-Badhun buŋguyal, Kukatj poŋkɨpal, Dyirbal buŋgu 'knee, bend in the river, wave,' Yidiny buŋgu 'knee, hump in a snake's body.' [NP 232, RD 110, 123, 223]

Amerind: Proto-Algonquian: *wāk- 'bend,' Blackfoot woxos 'shin' (from an earlier meaning of 'knee,' as seen in Maidu pok'ósi), Bella Bella wak- 'bent,' Crow išbaxe 'elbow,' Hidatsa išpaḥi 'elbow,' Caddo buko 'knee'; Penutian: Tfalatik pɔsq 'bow' (with metathesis, from earlier *pɔqVs), Kalapuya oposqu 'bow' (with metathesis), Maidu pok'ósi 'knee,' Nisenan p'əkkasi 'elbow,' Zuni poʔku 'to fold,' Texistepec boka 'elbow,' Pokonchi bak 'crooked,' Sierra Popoluca pikši 'bow,' Mixe kupokš 'elbow'; Hokan: Shasta ʔičipka 'knee,' Achomawi lupuʔisi 'bow,' Chumash sibuk ∼ šipuk 'elbow,' Walapai mipuk 'knee,' phúʔ 'bow'; Central Amerind: Varohia čopokori 'knee'; Chibchan-Paezan: Guamaca buka 'knee, elbow,' Rama buk 'twist,' Atanque buküh-köna 'knee,' Warrao oboka 'elbow,' Colorado te-bunga 'elbow,' Cayapa ne-bumbuka 'knee,' Chimu č'epuk; Andean: Jebero pöktenja 'bow,' Ona epekten 'elbow,' Alakaluf kolpakar 'knee'; Macro-Tucanoan: Iranshe poku 'bow (n.),' Proto-Nambikwara *pako 'crooked,' *pok 'bow (n.)'; Equatorial: Paumari amabokoi 'elbow,' Guarañoca pokà 'bow,' Cuiva tabóko 'knee,' Palicur ubowγi, Karif bugunuge 'elbow'; Macro-Carib: Miranha thüboqua 'bow,' Apiaca topkat; Macro-Panoan: Mayoruna mupukušau 'elbow,' Panobo waʔpuško 'elbow' (with metathesis), Sapiboca embako 'elbow,' Tiatinagua waku; Macro-Ge: Mohačobm pokai 'bow,' Umotina boika, Bororo boiga, Opaie či-p̌ege-ri 'elbow.' [AM 157, MT 16, AMN]

3 BUR 'ashes, dust'

Nilo-Saharan: Songhai: Gao *bonni* 'ashes,' Djerma *boron*; Berta *bub(u)ʔda*; Central Sudanic: Bongo *buru-ku,* Keliko *ɔfɔrago*; East Sudanic: Kenzi, Birgid *u-burti,* Murle *būr,* Mursi *burr,* Balé *bur,* Shilluk, Bor *bur,* Lango *buru,* Alur *burru.* [NS 9, CN 7, ES 5, NSD 6, NSB]

Afro-Asiatic: Proto-Afro-Asiatic **b(w)rH* 'loose soil, sand, dust'; Semitic: Proto-Semitic **br* 'dust,' Arabic *baraj* 'dust, soil,' Mehri *berōr* 'sandy seashore,' Classical Hebrew *bar* 'field, open space,' Proto-Semitic **bwr* '(fallow) ground,' Arabic *bawr* 'fallow ground,' Syriac *būrō,* Akkadian *bāru* 'open space'; ?Berber: Shilha *tamurt* 'soil'; Cushitic: Beja *būr* 'soil,' Bilin *birā* 'soil,' Saho *baṛo,* Afar *baḷō,* Somali *bɛrri*; Chadic: Proto-Chadic **'bwr* 'sand,' Angas *'bur* 'sand, dust,' Logone *búrá,* Gider *burduku* 'soil.' [CS 398, N 22]

Kartvelian: Svan *burγw* 'to raise dust,' *birγw* (< **burγw-i*) 'dust, ashes,' ?Middle Georgian *bre.* [N 22]

Uralic: Proto-Uralic (Illich-Svitych) **porV* 'dust, sand, dirt'; Samoyed: Kamassian *püre* 'sand'; Ugric: Ostyak *per* 'ashes'; Finnic: Finnish *poro* 'hot ashes, course dust,' Estonian *pori* 'mud,' Mansi *pors* 'sweepings.' [U 68, N 22]

Dravidian: Proto-Dravidian **pūrᶠV ~ *porᶠV* 'loose soil, sand, dust,' Malto *porsi* 'sweepings,' Naikri *buṛdi* 'ash,' Telugu *būḍida* 'ashes,' Tulu *poyyè* 'sand,' Malayalam *purᶠti* 'dust, earth,' *pūyi* 'sand,' Tamil *purᶠti* 'dust, dry earth,' *pūrᶠ* 'powder, dust.' [D 4316, N 22, NSD 6]

Turkic: Proto-Turkic **bōr,* Chuvash *pur(ǎ)* 'chalk,' Tuva *por* 'clay,' Jakut *buor* 'soil, clay, dust,' Altai *pur* 'ashes,' Uighur *bor,* Kazakh *bor* 'chalk.' [N 22]

Mongolian: Khalkha *bur* 'dirty, muddy, dark,' Buriat *bur* 'silt, swamp, clay.' [N 22]

Tungus: Manchu *buraki* 'dust, sand,' Nanai *buräxin* 'dust,' Oroch *buräxi.* [N 22]

?Eskimo-Aleut: Proto-Eskimo-Aleut **pujV ~ *apju* 'dust, mud, soot.' [EA]

Burushaski *bur-di* 'the ground.'

?Indo-Pacific: Tasmanian *būrana* 'smoke.'

Australian: Proto-Australian **burin ~ *burinj* 'smoke.' [AC 75]

Amerind: Chibchan-Paezan: Cuna *piru* 'ashes,' Uncasica *bura,* Manare *oka-bora,* Move *ñio-bru,* Guatuso *purun,* Catio *pora* 'dust'; Andean: Lupaca *purka* 'ashes'; Equatorial: Shuara *pupuur* 'dust,' Bare *baridi* 'ashes,' Wapishana *parati,* Goajiro *purpura* 'dust'; Macro-Panoan: Taruma *gula-paru* 'powder'; Macro-Carib: Yagua *pupāndru* 'ashes'; Macro-Ge: Proto-Ge **prə* 'ashes,' Krenje *pro,* Cayapo *pra* 'embers,' Guato *(ma-)fora(-ta)* 'ashes,' Caraja *brībi.* [AM 11, AMN]

4 ČUN(G)A 'nose; to smell'

KHOISAN: ≠Au.//eî *č'ũ* 'nose,' !Kung *tˢʼṹ* ∼ *sṹ*, !O-!Kung *tˢn* ∼ *čn*; G//abake *čui*, Naron *sõ* 'to snuff,' Nama *suni* 'sniff, smell from'; /Xam *sũ* 'snore,' //Ng-!'e *sũʔwa* 'blow the nose,' Kakia /*nuha čuni* 'nostrils.' [K 89, SAK 488, 489, HF 1:10]

NILO-SAHARAN: Saharan: Zagawa *sina* 'nose,' Berti *sano*; East Sudanic: Meidob *i-siŋi* 'nose,' Ongamo *(a-ta-)sɪŋa* 'to sneeze,' Ik *sik'wa* 'to sneeze'; Central Sudanic: Shabo *čona* ∼ *šona* 'nose.' [NSB, KER, HF 12]

AFRO-ASIATIC: Proto-Afro-Asiatic **ṭ(w)n* ∼ **ṭ(j)n* 'smell; Ancient Egyptian *śn* 'to smell,' *śnśn* 'to breathe'; Omotic: Proto-Omotic **sin-t* 'nose,' Basketo *sinça*, Chara *sinḍā*, Gimira *sint*, Mao *šinto*; Cushitic: Burgi *suna*, Konso *sona*, Tambaro *sana*, Somali *san*, Kaffa *činno* 'odor,' Saho *sīn* 'to smell'; Chadic: Hausa *súnsùnā* ∼ *sánsànā* 'to smell,' Bachama *šine*, Bata *činne*, Klesem *siŋ*, Bana *činan*, Dari *šin*. [AA 54, N 51, HF 1:10]

KARTVELIAN: Georgian *sun* 'odor, to smell.' [N 51]

INDO-EUROPEAN: Proto-Indo-European **snā* 'to flow, dampness, nose'; Germanic: Proto-Germanic **snu* 'to smell, nose,' Swedish *snus* 'snuff,' *snuva* 'runny nose,' German *snau* 'snout, beak,' Old Icelandic *snoppe* 'to snuff,' Norwegian *snūt* 'nose,' English 'snout, sniff'; Baltic: Lithuanian *snukkis* 'snout.' [IE 971]

URALIC: Proto-Uralic (Illich-Svitych) **čüŋV* 'to smell, odor, smoke,' (Rédei) **śaŋk‰* 'smell, taste'; Samoyed: Nenets *t'üńē* ∼ *tińē* 'to smell'; Ugric: Vogul *seeŋkw* 'mist, vapor'; Finnic: Votyak *čyŋ* ∼ *šyŋ* 'smoke,' Zyrian *čyn* 'smoke,' ?Finnish *henki* 'breath, spirit.' [U 97, N 51, KR 462]

DRAVIDIAN: Tamil *cuṇṭu* 'bill, beak,' Malayalam *cuṇṭu* 'beak, lips, snout,' Kannada *cuṇḍu* 'a bird's beak,' Parji *coṇḍ* 'mouth, beak,' Pengo *coṇḍi* 'beak of a bird,' Kui *suḍa* 'mouth, beak,' Kuwi *hoṇḍi* 'mouth.' [D 2664]

CAUCASIAN: Proto-Caucasian **sHwi̲Int'* 'to smell, snot,' Proto-Avar-Andi **s̄ʷint'V* 'to smell, snuff,' Avar *s̄unt'* 'snuff,' *sunt'(-ize)* 'to smell,' Dargi *sunt'* 'scent, odor,' Lak *s̄unt'* 'snuff,' Proto-Lezghian **s̄ʷi̲Int'* 'snot,' Tsaxur *suInt'* 'snot,' ?Hurrian *sunA* 'breath, soul.' [HF 1:10, C 190]

BASQUE *su-dur* 'nose,' *sun-da* 'smell.'

BURUSHASKI *šũŋ (ɛtʌs)* ∼ *s̃ṹ (ɛtʌs)* 'to smell.' [B 335]

SINO-TIBETAN: Karen *suŋ* 'odor'; Tibeto-Burman: Proto-Tibeto-Burman **sVna* 'nose,' **suŋ* 'smell,' Tibetan *sna*, *bsuŋ* 'smell (sweet),' Nung *səna*, Janggali *sina*, Digaro *həna(-gam)*, Burmese *hna*, *sàŋ* 'emit a pleasant odor.' [ST 101, 405, HF 1:10]

NA-DENE: Haida *sánjuu* 'smell,' *sīnaŋ* 'sniffling'; Tlingit *čan* 'stench'; Eyak *čãh* ∼ *čãʔ* 'stink'; Athabaskan: Proto-Athabaskan **-čin-ł* 'nose,' Galice *šan* ∼ *šãã* 'smell,' Kato *čən* 'smell.' [ND]

Indo-Pacific: Baruya *sɨnna* 'nose,' Musak *sinami-* 'to smell.' [FS 105]

Nahali *čōn* 'nose.' [NA]

Miao-Yao: Miao *tsinyu* 'nose,' Yao *(pu-)tsoN.* [HF 1:10]

Daic: Ong Be *zoŋ* 'nose,' *suŋ (mu)* 'to blow the nose' (= to-blow [nose-mucus]). [PB 345]

Austronesian: Proto-Austronesian **iğuŋ ∼ *uğuŋ* 'nose,' Kuvalan *uğuŋ,* Proto-Philippine **suŋaD,* Proto-Oceanic **isu(ŋ) ∼ *untsu(ŋ),* Fijian *utsu,* Proto-Polynesian **isu;* Proto-Austronesian **t'uŋal ∼ *suNar* 'to sneer, turn up the nose.' [AN 67, 158; WW 139, 227; PB 345]

Amerind: Almosan-Keresiouan: Seneca *ʔosḗnõʔ* 'smell,' Chiwere *sĩŋe,* Tutelo *sũw* 'stink'; Penutian: Wintu *sono* 'nose,' Chukchansi *sinik',* Gashowu *sīn-wiyi* 'to blow the nose,' Yokuts *ṣēniṭ'* 'smell,' Yaudanchi *senk'a* 'smell,' Huave *šink* 'nose,' Santa Cruz *suunta* 'snot,' Lake Miwok *ṣin-* 'blow the nose,' Central Sierra Miwok *sēŋ-aH* 'smelly thing'; Central Amerind: Tewa *sũ* 'smell,' Kiowa *sẽ,* Proto-Central Otomi **šiñũ* 'nose,' South Pame *šinyû;* Chibchan-Paezan: Atanque *sun-köna* 'beak,' Binticua *misun-a* 'nose,' Move *inson,* Colorado *sin,* Timicua *čini;* Andean: Sek *čuna,* Leco *(bi-)činua,* Proto-Quechuan **sinqa;* Macro-Tucanoan: Ubde-Nehern *čin-uehei* 'smell,' Yuri *čunama;* Equatorial: Campa *asanki-ro,* Callahuaya *čini* 'nose,' Caranga *čonanğa* 'stink.' [AK 175, CP 133, A 79, 106, AMN]

5 KAMA 'hold (in the hand)'

Khoisan: Zhu *xȧm(-xéi)* 'rub back and forth'; Kxoe *xôm* 'crush with the hands.' [SAK 852]

Niger-Congo: Dagomba *kam* 'squeeze,' Nupe *kã,* Proto-Bantu **kama,* Swahili *kama* 'to squeeze, to milk,' *kama-ta* 'to take hold, seize, grasp.' [KS 59, BA III: 263]

?Nilo-Saharan: Songhai *kaŋkam* 'squeeze' (< **kamkam* ?). [KS 59]

Afro-Asiatic: Proto-Afro-Asiatic **km* 'seize, take, squeeze'; Semitic: Akkadian *kamū* 'to capture,' Arabic *kamaša* 'seize, grasp'; Cushitic: Dahalo *kam* 'to hold,' Kwadza *komos* 'to grip,' Iraqw *kom* 'to have'; Berber: Tuareg *ekmem* 'squeeze'; Chadic: Hausa *kāma* 'to catch,' Musgu *kaw* 'seize,' Gidar *gəma* 'to take,' Masa *čum.* [AA 63, N 157, AB 160]

Indo-European: Proto-Indo-European **gem ∼ *gemō* 'to grasp with both hands, seize'; Armenian *čmlem* 'I squeeze'; Greek *geuto* 'he took' (< **gem-to*); Celtic: Old Irish *gemel* 'fetters'; Germanic: Old Swedish *kumla* 'to crumple'; Baltic: Latvian *gùmstu* 'to seize, grasp'; Slavic: Old Church Slavic *žĭmoṣ* 'I press, squeeze.' [IE 368, N 157, AB 171]

Uralic: Proto-Uralic (Illich-Svitych) **kama-lV ∼ *koma-rV* 'handful,' (Rédei) **kom%(r%* 'palm of the hand,' (Rédei) **käme(-ne);* Samoyed: Yenisei Samoyed *hammara* 'hand'; Finnic: Finnish *kamahlo ∼ kahmalo*

'double handful,' Estonian *kamal* 'handful,' Mordvin *komoro*, Saami *goab-mer* 'double handful.' [U 42, N 157, KR 137, 175]

DRAVIDIAN: Proto-Dravidian **kamV* 'to seize, take, hold,' Koraga *kamḍi* 'to steal,' Telugu *kamucu* 'to hold, seize,' Malto *kam* 'to gather (by oneself).' [D 1326, N 157]

TURKIC: Proto-Turkic **kam-a* ~ **qam-a* 'to take, seize,' Old Uighur *qama* 'to take prisoner, surround,' Kirghiz *kama* 'to surround, arrest,' Tatar *kama* 'to herd cattle into a pen,' Nogai *kam-ty* 'to seize.' [N 157]

MONGOLIAN: Written Mongolian *qamu* 'to gather, pick up,' Khalkha *xamǎ* 'to gather, pick up.' [N 157]

TUNGUS: Proto-Tungus **kama* ~ **kamu* 'to press, oppress, forbid,' Nanai *kama-le* 'to press, clasp,' Olcha *kama-lu* 'to forbid,' *kama-lğu* 'to press,' Orok *kamu-i* 'to take in one's arms, seize,' Evenki *kama* 'deny assistance to, oppress.' [N 157]

CAUCASIAN: Proto-Caucasian **k'ēmV* 'armful, handful,' Proto-Lak **k'ama* 'handful,' Proto-Lezghian **k'em(a)* 'armful.' [C 124]

?INDO-PACIFIC: North New Guinea: Arapesh *kum* 'to steal,' Bosngun *kamba* 'to steal,' Siaute *kupi* 'to take.' [NNG 45]

MIAO-YAO: Proto-Miao-Yao **ŋgam* 'to crush, squeeze' (< **kamgam*), Hai-ninh Yao *gam* 'to crush or squeeze with the hand.' [PB 315]

DAIC: Tai: Proto-Tai **hŋam* 'to lay hold of, grasp' (< **kamgam*), **kum* 'hold with the hand'; Kam-Sui: Sui *ʔńam* 'to hold,' Mak *ńam* 'to clench the fist, take hold of' (< **ʔŋam* < **kamgam*); Li: Proto-Li **kəm* 'to press with the hand, squeeze,' Southern Li *kom (luoi)* 'to squeeze' (= press [down]); Ong-Be *kom* 'to press down.' [PB 315]

AUSTRONESIAN: Proto-Austronesian **kem* 'enclose, cover, grasp,' **gemgem* 'hold, grasp in the fist, make a fist,' Rukai *(wa-)gəmgəm* 'to squeeze in the hand.' [AN 54, 74, 78; WW 103; PB 315-16]

6 KANO 'arm'

KHOISAN: /Xam //kũ 'arm,' /Nu-//en //kan 'branch'; Naron //k'õã 'arm,' Nama //õa(-b); !Kung //kãũ 'branch,' ?≠hã ~ ≠hā 'arm.' [SAK 130, 186]

NIGER-CONGO: Yingulum *kəní* 'arm,' Fali *kʌn*; Bantu: Proto-Bantu **kónò* '(fore)arm,' Nyali *(i-)kón(-do)* 'hand,' Swahili *(m-)kono* 'arm, forearm, hand, front paw.' [BA 297, AT 11]

NILO-SAHARAN: Kunama *kò'nà* 'hand,' *u-kun-kula* 'armpit, elbow' (= arm-hole), Ilit *kon* 'hand,' Berta *k'oŋ-k'oloŋ* ~ *kʷɔn-kʷɔlɔŋ* 'elbow,' Teso *(á-)kànì* 'hand,' Masai *(eŋ-)káíná* 'hand.' [CN 5, AT 79, NSB]

?AFRO-ASIATIC: Chadic: Proto-West Chadic **ḥA-ganA* 'arm, shoulder,' An-gas *gwon* 'shoulder,' Bokkos *kôŋ* 'arm,' Sha *g̃aan*; Cushitic: Iraqw *kun(-day)* 'foot.' [AT 86, OS 683]

?Indo-European: Proto-Indo-European *kon-t- ∼ *kn-t- '10,' Germanic: Proto-Germanic *handu(-z) 'hand,' English hand.

Uralic: Proto-Uralic (Rédei) *konʓ ∼ *konʓ-ala 'armpit'; Yukaghir kun(-el) '10,' xanba 'hand'; Ugric: Hungarian hón ∼ hón(-alj) 'armpit' (-alj 'that which is beneath'), Vogul kan(-l) 'armpit'; Finnic: Finnish kain (-alo), Votyak kun(-ul), Zyrian kon(-uvt), (-uvt 'that which is beneath'). [U 101, KR 178]

Dravidian: Tulu kaŋkuḷa 'armpit' (= arm-hole), Kannada kaŋkurʓ∼ gaŋkəlu 'armpit,' Kota ganjguly. [D 1234, N 220]

Caucasian: Proto-Caucasian *ɢHwịnĀ 'arm, shoulder,' Proto-Lezghian *q̄ün 'shoulder,' Krytz qunä, Archi qIun. [C 156]

Yeniseian: Proto-Yeniseian *ken 'shoulder.' [Y 28]

Sino-Tibetan: Ancient Chinese *kēn 'shoulder'; Proto-Tibeto-Burman *kan 'arm.' [Y 28, TB 438]

Na-Dene: Proto-Eyak-Athabaskan *gằn 'arm,' Tanana gan, Tlatskanai okane, Ingalik gàn, Galice gaaneʔ 'arm, branch,' Navajo gaan 'arm.' [SN, ND]

Indo-Pacific: Tasmanian: Southeastern gouna ∼ guna ∼ gouana ∼ wana 'arm, hand,' Parawen konɛnɛ 'arm,' Jilim kanan 'left (arm),' Dumpu kiñɛn 'shoulder,' Gapun akan 'arm.' [T 83, FS 107, IP 820]

?Nahali: khaṇḍa 'shoulder,' akhaṇḍi 'finger.' [NA 59, 85; Kuiper believes khaṇḍa is probably a borrowing from Kurku.]

?Austroasiatic: Vietnamese cánh ∼ cành 'arm, branch, wing.'

Daic: Tai: Proto-Tai *xeen 'arm,' Dioi kien 'arm, sleeve,' Sek keen; Kam-Sui: Sui ćhin, Then khyin 'sleeve'; Ong-Be kan (mo) 'forearm,' gen (mo) 'upper arm.' [PB 379]

Amerind: Almosan-Keresiouan: Blackfoot kin(-ists) 'hand,' Kutenai kin, Kalispel axən 'arm,' Okanagan -aqan, Kwakwala -xaina 'shoulder'; Penutian: Tunica hkeni 'hand,' Chitimacha ʔokun 'shoulder,' Sayula konik 'carry on the shoulder'; Central Amerind: Chichimec kan'a 'hand,' Otomi xí'nyí 'shoulder'; Chibchan-Paezan: Murire kana 'arm,' Bintucua guna 'arm, hand,' Guamaca guna 'arm,' Atanque guna 'hand,' Chimu aken 'arm'; Andean: Ona haken 'arm,' Tehuelche aken 'shoulder blade,' Simacu kanúxua 'shoulder,' Selknam k'ojjn; Macro-Tucanoan: Särä axkono 'shoulder,' Uaiana akono 'shoulder, armpit,' Omoa naxkono 'shoulder'; Equatorial: Piro kano 'arm,' Parecis -kano-, Canamari kano 'shoulder,' Timote -kiñem 'hand,' Mocochi kiñien, Tinigua kwana, Trumai kanap; Macro-Carib: Miranya gano-aga 'hand,' gano-múhtee 'armpit,' Coeruna kunia 'hand'; Macro-Panoan: Proto-Panoan *mï-kïnï 'hand,' Lengua kanyama 'armpit'; Macro-Ge: Bororo kana 'upper arm,' Camican guangäni 'arm,' Botocudo kinaon 'shoulder,' Opaie (či-)kã 'shoulder.' [AK 6, CP 4, AM 16, AMN]

7 KATI 'bone'

?KHOISAN: /Xam */kuttən* 'bone behind the ear,' //Ng-!'e *ketn* 'bone.' [BD
    87, 326]

NILO-SAHARAN: ?Berta *k'ara* 'bone,' East Sudanic: Nera *kətii(n)*, Kenuzi *kīd*,
    Kundugr *koidu*, Turkana *ako-*, Lotuko *-γōtyu*, Bari *kuyu*, Debri *kwedu*,
    Proto-Southeast Surmic **gigec*. [ES 21, NSB, SES]

AFRO-ASIATIC: Proto-Afro-Asiatic **qš* 'bone'; Ancient Egyptian *qś* 'bone';
    Semitic: Arabic *qaṣṣ ∼ gaṣṣ* 'sternum'; Cushitic: Proto-Cushitic **(m-)qS*
    'bone,' Kambata *miqqa-ta* (*qq* < **qS*); Omotic: Jeba *ʔúús-u* (< **k'us*),
    Badditu *miqi-tē*, Wolamo *maqa-tta*; Berber: Proto-Berber **ġs(j)* 'bone,'
    Shilha *ixs*, Kabyle *iġes*, Tuareg *eġēs*; Chadic: Proto-Chadic *k'ṣ(j)* 'bone,'
    Proto-West Chadic **ḥa-k'asi*, Hausa *k'ā́ší*, Musgu *keṣ'ke*, Gerka *γas*, Som-
    rai *guseŋ*, Karbo *kāso ∼ kāsi*. [CS 225, AA 11, N 219, OS 620, HF 12]

INDO-EUROPEAN: Proto-Indo-European **kos-t* 'bone'; Italic: Latin *costa* 'rib';
    Slavic: Old Church Slavic *kostĭ* 'rib,' Serbo-Croatian *kôst*, Russian *kost^j*.
    [IE 616, N 219]

?URALIC: Samoyed: Kamassian *kot* 'rib'; Finnic: Mordvin *kaskă ∼ kaske*
    'sacrum.' [N 219, SUL 492]

DRAVIDIAN: Kurux *xōc(-ol)* 'bone,' Malto *qoc(-lu)*. [D 1288]

CHUKCHI-KAMCHATKAN: Proto-Chukchi-Kamchatkan **(χ)ətʌ-χəmV* 'bone.'
    [CK 1]

?ESKIMO-ALEUT: Proto-Eskimo-Aleut **qat'ɨ* 'breast, ribs.' [EA]

CAUCASIAN: Proto-Caucasian **kŏts'a* 'kind of bone,' Proto-Dido **k'ots'u*
    'back of head,' Proto-Lezghian **k'ats'a* 'vertebra, shin,' Proto-Xinalug
    *kɨz 'thigh, hip.' [C 116]

BASQUE *gar-khotx(e)* 'nape' (*gara* = 'skull').

?BURUSHASKI *kʌnǰa* 'back of neck, neck joint.'

SINO-TIBETAN: Proto-Sino-Tibetan **kut* 'bone,' Old Chinese **kwət*. [SC 57]

NA-DENE: Haida *(s)kuts ∼ (s)kuği* 'bone,' Eyak *q'ahš*. [ND]

INDO-PACIFIC: South New Guinea: Dabu *kut* 'bone,' Dibolug *kute*, Ngamai
    kuta, Kawam *kutra*, Parb *kwod*, Tunjuamu *guat*, Tokwasa *kuart*, Bangu
    kuar, Keladdar *kadrowa*. [SNG 9]

AMERIND: Almosan-Keresiouan: Bella Bella *k'ōdᶻo* 'bone, rib' (borrowing
    from Chinook?), Pawnee *kīsu* 'bone,' Wichita *kīsʔa*, Acoma *ya-gətˢ'-əni*
    'rib'; Penutian: Chinook *qotˢo* 'bone,' Northern Sierra Miwok *kyččyč*,
    Plains Miwok *kəčəč*, Yuki *k'iʔt*, Wappo *kúțe* 'rib,' Chitimacha *katˢi* 'bone,'
    Uspantec *k'alk'aš* 'rib'; Chibchan-Paezan: Binticua *katia ∼ kiasi* 'rib,'
    Matanawi *kisi*, Atacameño *kada* 'bone,' Itonama *čɨdɨki*, Chimu *čotti*,
    Colorado *čide*; Andean: Selknam *q'ejt'* 'breastbone,' Mapudungu *kadi*
    'rib,' Genneken *uguets* 'bone,' Alakaluf *akšiase* 'rib'; Macro-Tucanoan:

Kapishana *nya-kotsī*; Equatorial: Caranga *kaičû* 'bone'; Macro-Panoan: Cavineña *(epere-)'katse* 'rib,' Komlek *kadekotti* 'bone,' Caduveo *koda-uek'o* 'rib.' [AM 141, P 102, CP 23, AIW, AMN]

8 K'OLO 'hole'

KHOISAN: ≠Au.//eî *!kuru* 'quiver' (n.), !Kung *!kɔro* 'hole,' *!kuru* 'quiver' (n.), *!koro* 'hole, grave,' !O-!Kung *kɔlɔ* 'hollow'; G//abake *koro* 'hole in tree,' *(čui) kxolo* 'nostrils' (= nose hole); /Xam *!kɔrro* 'to be hollow,' /huru 'hole,' /ūru 'anus,' /'Auni *!kuru* 'quiver' (n.). [SAK 371]

NILO-SAHARAN: Songhai *nkoro* 'buttocks'; Saharan: Kanuri *kuli* 'anus,' Teda *kulo*; Berta *k'oŋ-k'oloŋ* ∼ *kʷɔn-kʷɔlɔŋ* 'elbow' (= arm-hole, cf. the Kunama form below); Koman: Buldiit *kul(ma)* 'buttocks'; Kunama *kura* 'anus,' *ukunkula* 'armpit, elbow' (< *kan-kul* 'arm-hole'); East Sudanic: Temein *kukuruk(it)* 'buttocks,' Nandi *kulkul* 'armpit,' So *ukɔlkɔl* 'armpit,' Gaam *kura-n* 'hollow (in ground).' [NS 4, CN 2, 5, ES 3, NSD 3, KER 432]

INDO-EUROPEAN: Proto-Indo-European **(s)kūlo* 'hiding place, back part'; Indic: Sanskrit *kūlam* 'rear of army'; Italic: Latin *cūlus* 'buttocks, anus,' *clūnis* 'buttock, hip'; Celtic: Old Irish *cūl* 'back, rear,' Welsh *cil* 'back,' *clùn* 'buttock'; Germanic: Proto-Germanic **hulo* 'hole,' Gothic *hulundi* 'cave,' English hole, Swedish *näs-håla* 'nostril.' [IE 951]

URALIC: Proto-Finno-Ugric **köl* 'hole'; Ugric: Vogul *kal* ∼ *hal* 'crack,' Ostyak *kŏl* ∼ *hul,* Hungarian *halok* 'incision'; Finnic: Finnish *kolo* 'hole, crack,' Saami *golo* 'fissure,' Zyrian *kolas* 'crack,' Cheremis *kongəla* 'armpit,' Southern Estonian *kaŋgel* 'shoulder.' [U 101, 106, N 220, EU]

KOREAN *kul* 'cave.' [EU]

JAPANESE-RYUKYUAN: Japanese *kur* 'hollow, scoop out.' [EU]

DRAVIDIAN: Tulu *kulligè* 'buttocks,' *kaŋkuḷa* 'armpit' (= arm-hole), Kolami *kūla* 'buttock,' *ganjgūly* 'armpit,' Gondi *kula* 'buttock,' *kākri* 'armpit,' Kannada *kaŋkur* ∼ *gaŋkəlu* 'armpit,' Telugu *kauŋgili* 'breast,' *tsaŋkili* ∼ *tsakkili* 'armpit' (= arm-hole), Malayalam *akkuḷam* 'armpit, tickling,' Tamil *akkuḷ* 'armpit,' *akkuḷu* 'to tickle.' [D 1234, 2274, Supplement 30; N 220, NSD 3]

CAUCASIAN: Proto-Caucasian **kHwə̄rV* 'hole, pit, ravine,' Proto-Nax **kōr* 'window,' Proto-Dido **kurV* 'ravine,' Proto-Lak **kuIru* 'nest,' Proto-Dargi **kur* 'pit,' Proto-Lezghian **kur* 'pit, river,' Lezgi *k'ul-ux* 'backwards,' *k'ul-ux-k'il* 'hip, posterior, buttocks,' Kurin *qula* 'loins, buttocks.' [C 113, JR 58]

SINO-TIBETAN: Tibeto-Burman: Proto-Tibeto-Burman **kor* ∼ **kwar* 'hole,' **kali* 'armpit, tickle,' Tibetan (West) *kor* 'hollow in the ground, pit,' Lushei *khuar* ∼ *khur* 'hole,' *kor* 'ravine,' Dimasa *ha-khor* 'cave' (= earth-hole), *sisi-khor* 'armpit' (= tickle-hole), Bodo *ha-khor* 'hole, valley,' Bur-

mese *kălí* 'tickle,' *tshak-kăli* ∼ *lak-kăli* 'armpit' (= arm-hole, cf. the Tel-
ugu form above), Lakher *kili* 'tickle,' *ba-kəli* 'armpit.' [ST 265, 349, 350]

NA-DENE: Haida *kunts-qul* ∼ *kwun-zool* 'nostril' (= nose-hole). [ND]

DAIC: Khamti *kăle* 'tickle,' *kap kăle* 'armpit' *tsuŋ kări* 'tickle,' Shan *sop kălit*
'armpit'; Tai: Proto-Tai **xru* ∼ **ru* 'hole,' **xru ʔdaŋ* 'nostril'
(= hole nose). [PB 316, 410]

AUSTRONESIAN: Proto-Austronesian **kili* 'shoulder,' **kilikili* 'armpit,' Taga-
log *kili(ti)* 'tickling,' *kilikili* 'armpit,' Cham *kəlĕk* 'tickle,' Fijian *kili* ∼
kiri 'armpit,' Nggela *kilikili* 'tickle a tired pig to make it go.' [AN 80, 121,
WW 187, PB 230, 410]

9 KUAN 'dog'

KHOISAN: /Xam *!gwãĩ* 'hyena,' //Ng-!'e */xãĩ*, /'Auni */kãĩn*, Kakia */xãĩ*, /Nu-
//en */ūn*, !Kung */gwí*, !O-!Kung */gwĩ*. [SAK 380, DB 48]

AFRO-ASIATIC: Proto-Afro-Asiatic **k(j)n* 'dog, wolf'; Omotic: Haruro *kānō*,
Basketo *kanā*, Kullo *kana*, Gimira *kjan*, Kaffa *kunānō*, Mao *kano*; Chadic:
Gamergu *kenē*, Jegu *káń*. [CS 189, N 238, UOL 175]

INDO-EUROPEAN: Proto-Indo-European **kwon* ∼ **kun* 'dog'; Phrygian *kan*;
Greek *kuōn*; Italic: Latin *can(-is)*; Armenian *šun* ∼ *šan*; Indic: Sanskrit
çvan; Iranian: Avestan *span*; Tocharian *ku* ∼ *kon*; Germanic: Old English
hund, English hound. [IE 632, UOL 175, N 238, EU]

URALIC: Proto-Uralic (Illich-Svitych) **küjnä* 'wolf'; Finno-Ugric: Northern
Saami *gâidne* 'wolf,' Udmurt *kўjon* 'wolf,' Komi *kȯin* 'wolf'; Samoyed:
Ostyak Samoyed *kana(-k)* 'dog' (probably a borrowing) [N 238, UOL 175,
EU]

TURKIC: Old Turkish *qančiq* 'bitch.' [EU]

MONGOLIAN: Mongol *qani* 'a wild masterless dog.' [EU]

TUNGUS: Proto-Tungus **xina* 'dog,' Manchu *(inda-)xun*, Udej *inʻai*, Oroch
inaxki, Evenki *ina*, *inakin*, Lamut *ŋen*, Orok *ŋinda*. [N 238, EU]

KOREAN *ka* 'dog' (< *kani*). [N 238, EU]

GILYAK *qan* ∼ *kan* 'dog.' [EU]

ESKIMO-ALEUT: Sirenik *qanaγa* 'wolf.' [EU]

CAUCASIAN: Proto-Caucasian **χHwĕje* 'dog,' Proto-Avar-Andi **χʷoʔi* 'dog,'
Proto-Lezghian **χ̄ʷäja* 'dog.' [C 212]

BASQUE *haz-koin* 'badger' (lit. 'bear-dog').

YENISEIAN: Proto-Yeniseian **kūń* ∼ **gūń* 'wolverine.' [Y]

SINO-TIBETAN: Proto-Sino-Tibetan **qhʷīj* 'dog,' Archaic Chinese **kʰiwən*
'dog'; Tibeto-Burman: Proto-Tibeto-Burman **kwiy*, Tibetan *khyi*, Kana-
uri *kui*, Thebor *khui*, Vaya *uri*, Chepang *kwi*, Karen *gwi*. [ST 159, UOL
175]

?INDO-PACIFIC: Pila *kawun* 'dog,' Saki *kawuŋ*, Wodani *kawino*. [FS 14]

?Austronesian: Proto-Oceanic **nkaun* 'dog.' [WW 60]

Amerind: Hokan: Achomawi *kuān* 'silver fox,' Tonkawa *ʔekuan* 'dog,' North
   Yana *kuwan-na* 'lynx,' Yurimangui *kwan* 'dog'; Central Amerind: Je-
   mez *kiano,* Isleta *kuyanide,* Taos *kwiane-,* Tewa *tuxʷana* 'fox, coyote,'
   Zacapoaxtla *itˢkwiin-ti* 'dog,' Chatina *čuni,* Popoloca *kuniya,* Ixcatec
   ʔuniña, Chocho *ʔuña*; Chibchan-Paezan: Guamaca *kensi*; Equatorial: Es-
   meralda *kine*; Macro-Ge: Came *okong,* Serra do Chagu *hong-kon.* [A 86,
   CAN, UOL 176, AMN]

10 KU(N) 'who?'

Khoisan: ≠Au.//eî *kama* 'when, if,' *xa* (interrogative particle), !Kung *ka*
   'when,' *!kũ(-de)* 'who'; G//abake */kam* 'when,' Naron *kama* 'when, if,'
   Nama *hamo* 'when,'; /Xam *!ku(dɛxa)* 'who,' *xa* (interrogative particle).
   [SAK 384, 388, 757, 764, UOL 70]

Niger-Congo: Pam *kə̄gé* 'which,' Dama *káʔī̄* 'which,' Jukun *ákē* 'what,'
   Proto-Bantu **kí∼ ká* 'which,' Swahili *ga-ni* 'what, why, what kind.' [BA]

Nilo-Saharan: Fur *kii* 'who,' *ka* 'what,' Daza *ka* 'which,' Masai *ka* 'which,'
   Didinga *ŋani* 'who' (< **kani* ?), Liguri *keneen* 'who,' Nyala *k-rem* 'how
   many,' Shatt *k-reñ* 'how many,' Shabo *kukne* 'who.' [NS 149, CN 126, HF
   12]

Afro-Asiatic: Proto-Afro-Asiatic **k(w) ∼ *q(w)* 'who'; Semitic: Proto-
   Semitic **kV* 'how,' Arabic *ka,* Geez *kama,* Aramaic *kə,* Akkadian *kima ∼*
   ki 'how,' South Arabian *ko* 'how, why,' Mehri *ūkō* 'why'; ?Berber: Tuareg
   akken 'how,' Gdames *(mə-)k*; Cushitic: Proto-Cushitic **kw* 'who,' Somali
   kú-ma 'who (masc.),' Oromo *ka-mi* 'who,' *aka* 'how'; Omotic: Kaffa *kō-nē*
   'who,' Mao *konne,* Kullo *hone,* Wolamo *ōne,* Beja *kāk(u)* 'how'; Chadic:
   Proto-Chadic **k'(w)* 'who,' Hausa *k'ầ,* Bura *ga* 'what,' Logone *γwani,*
   Somrai *kāna* 'who,' Mubi *gin.* [N 232, UOL 70]

Indo-European: Proto-Indo-European **kʷo ∼ *kʷi* 'who,' **-kʷe* (coordi-
   nating conjunction); Indic: Sanskrit *kas* 'who'; Iranian: Avestan *kō*; Ar-
   menian *o* (< **kʷo*); Anatolian: Hittite *kuiš* 'who,' *kuit* 'what,' Luwian
   kui 'who,' Lydian *qis* 'who,' *qid* 'what'; Albanian *kë* 'whose'; Italic: Latin
   quis 'who,' *quis-que* 'whoever,' *quod* 'what,' *quam* 'how, as,' *quom* 'when,'
   (arma virum)-que '(arms) and (the man)'; Celtic: Old Irish *cia* 'who,' *cid*
   'what'; Germanic: Gothic *hwas* 'who,' English who, what, when, where,
   why, how; Baltic: Old Prussian *kas* 'who,' *ka* 'what'; Slavic: Old Church
   Slavic *kъto* 'who'; Tocharian: Tocharian A *kus* 'who, what.' [IE 644, N 232,
   EU, UOL 70]

Uralic: Proto-Uralic (Rédei) **ke ∼ *ki* 'who,' (Rédei) **ku ∼ *ko* 'who,
   which, ?what'; Yukaghir *kin* 'who,' *hon* 'where,' *hadi* 'which,' *hodier*
   'why'; Proto-Uralic (Illich-Svitych) **ke ∼ *ko ∼ *ku* 'who'; Samoyed:

Yurak *hu* 'who,' *huna* 'where,' Tavgy *kua* 'which,' *kuninu* 'where,' *kune* 'when,' Selkup *kutte* 'who,' *kun* 'where,' Kamassian *kaamõn* 'when'; Ugric: Vogul *kon* 'who,' *qun* 'when,' Ostyak *hŏjə* 'who,' *hŏtə* 'what,' *hun* 'when,' Hungarian *ki* 'who'; Finnic: Finnish *ken* ∼ *kene* ∼ *ke* ∼ *ku* ∼ *kuka* 'who,' *kussa* 'where,' *koska* 'when,' Saami *gi* ∼ *gæ* ∼ *gutti* 'who,' *goktĕ* 'how,' Mordvin *ki* 'who,' Cheremis *ke* ∼ *kö* ∼ *kü* ∼ *kudõ*, Votyak *kin* 'who,' *kin-ke* 'someone,' *ku* 'when,' Zyrian *kin* 'who,' *kod* 'which,' *ko* 'when.' [U 44, 46, N 223, 232, EU, KR 140, 191]

TURKIC: Proto-Turkic **k'Em* 'who,' **ka* ∼ **qa* (interrogative base), Chuvash *kam* 'who,' Old Turkish *käm* 'who,' *qa-ñu* 'which,' *qa-na* 'where,' Old Uighur *kim* 'who,' *qaju* 'which,' *qajda* 'where,' Tatar *kem* 'who,' Karagas *kum* ∼ *kym*, Jakut *kim*, Old Oguz *qanda* 'where.' [N 223, 232, EU, UOL 70]

MONGOLIAN: Proto-Mongolian **kė-n* 'who,' **ka* 'where, whither,' Written Mongolian *ken* 'who,' *qa-mi-ga* 'where,' Khalkha *xeŋ* 'who,' *xāna* (< **ka-ga-na*) 'where,' Kalmyk *ken* 'who,' *xā* (< **ka-ga*) 'where, whither,' Moghol *ken* 'who.' [N 223, 232, EU]

TUNGUS: Proto-Tungus **xa* 'what, how, how much,' Nanai *xaj* 'what,' *xadu* 'how much,' *xoni* 'how,' Manchu *aj* 'what,' *udu* 'how much,' Udihe *ī* 'what,' *adi* 'how much,' *ono* 'how,' Even *ī-räk* 'how,' *adi* 'how much,' *ōn(i)* 'how.' [N 232, EU]

KOREAN *ka* (interrogative particle). [N 232, EU]

JAPANESE-RYUKYUAN: Japanese *ka* (interrogative particle, indefinitizer), *ka* . . . *ka* (alternating conjunction), Ryukyuan *ča* 'what.' [EU]

AINU *ka* (interrogative particle, indefinitizer), *ka* . . . *ka* (coordinating conjunction). [EU]

GILYAK *ka* (interrogative particle), *ko* . . . *ko* (coordinating conjunction). [EU]

CHUKCHI-KAMCHATKAN: Kamchadal *k'e* 'who' (genitive *k'en*), Chukchi *mik* ∼ *mek* 'who,' *req* ∼ *raq* 'what,' Koryak *qej* . . . *qej* 'either . . . or,' *kur* 'to be who?, to be what?,' Kerek *jaq* 'who, what.' [EU]

ESKIMO-ALEUT: Proto-Eskimo-Aleut **ken* 'who,' **qa-* (interrogative pronoun), Aleut *ki-n* 'who,' *qata* 'where, whither, what,' *qanangun* 'where,' *qanayam* 'when,' *qanagan* 'whence,' Eskimo *ki-na* 'who,' Greenlandic *qaŋga* 'when,' *qanuq* 'how,' Siberian Yuit *qafsina* 'how many,' Alaskan Yuit *-ka* (question particle). [EU, EA 118, 121]

CAUCASIAN: Proto-Caucasian **kʷi* 'who, which,' Kurin *ku-* 'what,' Archi *kʷi-* 'who,' Avar *kʰi-n* 'how.' [UOL 70, SC 149]

BURUSHASKI *kɛ* 'if, when,' *kɛ* 'and,' *kɛ* . . . *kɛ* 'both . . . and,' *(men . . .) kɛ* '(who)ever.' [B 231, 265]

SINO-TIBETAN: Old Chinese **kjei* 'how much,' Hruso *kʰi-nia* 'how many,' *kʰi-mia* 'how far.' [SC 149]

NA-DENE: Haida *gyis-to* ∼ *kiš-to* 'who,' *gōsu* ∼ *guu(s)* 'what,' *gyinu* 'where,'
   giisant 'when'; Tlingit *kusu* ∼ *gùsú* ∼ *gū* 'where,' *kūnsa* 'how much.' [ND]

?AUSTRALIAN: Maung *gunuga* ∼ *gigi* 'what,' Tiwi *kuwa* 'who,' *kamu* 'what.'
   [RD 373, 376]

NAHALI *(nani) ka* 'anyone' (*nani* 'who'), *(nan) ka* 'anything' (*nan* 'what').
   [NA 92]

AUSTROASIATIC: Munda *o-ko-e* 'who,' *o-ka* 'what,' *če-le* 'which'; Mon-Khmer:
   Vietnamese *gi* 'what,' Nicobarese *či* 'who,' *či-n* 'who, what,' *kahä* 'what,'
   čan ∼ *ču* 'where.' [UOL 70]

AUSTRONESIAN: Proto-Austronesian **ku'a[']* 'how.' [AN]

AMERIND: Almosan-Keresiouan: Kutenai *ka* 'where,' Wiyot *gu-* 'when, where,'
   Yurok *kus* 'when, where,' Passamaquoddy *kek^w* 'what,' Chemakum *āč'is*
   'what,' Quileute *ak'is* 'what,' *qo-* 'where,' Nootka *ʔaqi-* 'what,' Bella
   Bella *akoiqkan* 'who,' Pentlatch *kwənča* 'where,' *kwəs* 'when,' Upper
   Chehalis *ka-n* 'do what?,' Keres *hēko* 'whither,' Quapaw *ka* 'what,' Ofo
   kaka 'what,' Wichita *ʔēkiyaʔ* 'who,' Caddo *kwit* 'where,' Cherokee *gago*
   'who,' Onondaga *kanin* 'where,' Seneca *kwanu* 'who,' Mohawk *ka* 'where';
   Penutian: Tsimshian *gu* 'who,' Alsea *qau*, Kalapuya *ūk*, Coos *qanč* 'where,'
   Siuslaw *qani*, Klamath *kani* 'who,' *ka* 'which,' Bodega Miwok *ʔeke* 'what,'
   ʔeketto 'where,' Zuni *kāk'i-pi* 'when,' Tunica *kaku* 'who,' *kanahku* 'what,'
   kaʔaš 'when,' Natchez *kanne* 'someone,' *gōš* 'what,' Huave *xaŋ* 'who,' *key*
   'what,' Quiche *xan* 'when'; Hokan: Achomawi *kī* 'who,' Washo *kudiŋa*
   'who,' *kuŋate* 'what,' *kuŋa* 'where,' East Pomo *kia* 'who,' *k'owa* 'what,'
   Chumash *kune* 'who,' *kenu* 'why,' Esselen *kini* 'who,' *ke* 'where,' Walapai
   ka 'who,' Seri *kiʔ*, Coahuilteco *ka* 'what,' Chontal *kanaʔ* 'when,' Tlap-
   panec *gwana*, Jicaque *kat* 'where,' Yurimangui *kana* 'what,' *kuna* 'where';
   Central Amerind: Proto-Aztecan **kaan* 'where,' **keem* 'how,' **kee-ski*
   'how much, how many,' Nahua *aʔkon* 'who,' Zacapoaxtla *akoni*, Yaqui
   hakuni 'where,' Isthmus Zapotec *gunaʔ*, Mazatec *kʔia* 'when'; Chibchan-
   Paezan: Cuna *kana* 'when,' Miskito *ajkia*, Paya *agini*, Terraba *kene*
   'where,' Tirub *koñe*, Totoro *kin* 'who,' Paez *kim* 'who,' *kīh* 'what,' Catio
   kai 'who,' Moguex *kina* 'who, what,' Tucura *karea* 'why'; Andean: Yah-
   gan *kunna* 'who,' *kanin(a)* 'to whom,' *kana* 'where,' Tehuelche *keme* 'who,'
   ken 'which,' *kenaš* 'when,' *kienai* 'where,' Araucanian *kam* 'how,' Aymara
   kuna 'what,' *kamisa* 'how,' Iquito *kanʌʌka* 'who,' Aymara *kuna* 'what,'
   kauki 'where'; Macro-Tucanoan: Ticuna *karo* 'where,' *kejaito* 'when';
   Equatorial: Ayore *gōsi* 'who,' Tuyoneri *kate* 'what,' Yaruro *kanemo* 'when,'
   Uru *kančo*, Wapishana *kanum* 'what,' Puquina *kin*; Macro-Carib: Yaba-
   rana *ekkwarijawa* 'when,' *akətto* 'where,' Witoto *akö* 'what,' Miranya *kia*
   'where,' Faai *kiati*, Andoke *koide* 'who'; Macro-Panoan: Lule *kine-kinema*,
   Macca *kat^sik* 'who,' *kona* 'when' (rel.), Taruma *gaga* 'what,' Tacana *ket-
   sunu* 'when,' *kepia* 'where.' [AM: G102; UOL 70, AMN]

11 KUNA 'woman'

AFRO-ASIATIC: Proto-Afro-Asiatic *k(w)n ∼ *knw 'wife, woman'; Omotic:
Chara *gänēts* 'woman,' Kaffa *genē* 'lady,' Mocha *gäñe* 'lady, woman,' Shi-
nasha *geña* 'lady'; Cushitic: Proto-Cushitic *H-kwn 'wife,' Bilin ' *'əxʷina*
(pl. *'əkʷin*) 'wife,' Xamta *eqʷen* 'wife,' Dembia *kiūnā* 'wife,' Avija *xuonā*
'wife,' Oromo *qena* 'lady'; Semitic: Akkadian *kinītu* ∼ *qinītu* 'one of the
wives in a harem'; Berber: Proto-Berber *t-knw 'wife,' Tuareg *tēkne*
'wife,' Kabyle *ṯakna* 'one of the wives in polygamy'; Chadic: Margi *ŋkwà*
'girl' (< *m-kwà), Igala *ginum* 'woman,' Makari *gerim* 'woman,' Logone
gənəm 'woman.' [N 178, UOL 179]

INDO-EUROPEAN: Proto-Indo-European *gʷen ∼ *gʷenā 'wife, woman'; Ana-
tolian: Lydian *kâna* 'woman, wife,' Luwian *wanā*; Indic: Sanskrit *gnā* 'god-
dess'; Iranian: Avestan *gənā* 'wife'; Armenian *kin* (pl. *kanai-kʻ*); Greek:
Mycenaean *ku-na-ja*; Albanian *grue* ∼ *grua*; Celtic: Old Irish *ben*; Ger-
manic: Gothic *qino,* Old High German *quena,* English queen; Baltic: Old
Prussian *genno* 'wife'; Slavic: Old Church Slavic *žena*; Tocharian: Tochar-
ian B *śana*. [IE 473, N 178, EU, LC 922, UOL 179]

TURKIC: Proto-Turkic *küni 'one of the wives in polygamy,' Old Turkic *küni*
'wife,' Kirghiz *künü,* Azerbaijani *günü*. [N 178]

ESKIMO-ALEUT: Proto-Eskimo-Aleut *ʔaʁ(ɨ)na- 'woman,' Eskimo: Alaskan
aganak, Greenlandic *arnaq,* Yuit *arnaq* 'female person, woman.' [EU]

CAUCASIAN: Proto-Caucasian   *q(w)änV   'woman,'   Proto-Dagestan
*qonV(p̄V). [EC, NSC 59]

?INDO-PACIFIC: Andaman Islands: Bea *chána* 'woman,' *chana-da* 'mother';
Tasmanian: Southeast *quani* 'wife, woman'; Mugil *kanen* 'mother.' [T 471,
UOL 180]

AUSTRALIAN: Warrgamay *gajin* 'female of human or animal species,' Gamila-
raay *gunijarr* 'mother,' Ngaanyatjara *ngunytju,* Jalnguy *guyŋgun* 'spirit
of a dead woman.' [RD 119, UOL 180]

?AUSTROASIATIC: Mon-Khmer: Nancowry *kān* ∼ *kāne* 'woman.' [UOL 179]

AMERIND: Almosan-Keresiouan: Shawnee *kwan-iswa* 'girl,' Nootka *ganəmo,*
Bella Bella *ganəm* 'woman, wife,' Lkungen *kaŋi* 'girl,' Spokane *en-okhono*
'wife,' Siletz *qenaʔs* 'grandmother,' Santa Ana *kʼuwi* 'woman, wife,' Da-
kota *hun* 'mother,' Yuchi *wa-hane* 'old woman'; Penutian: Tsimshian
hanāɢ 'woman,' Cayuse *kwun-asa* 'girl,' Yawelmani *gaīna* 'woman,' Kon-
kow *kónoj* 'woman, wife,' Nisenan *kono* 'girl,' San Juan Bautista *atsia-
xnis,* Lake Miwok *ʔunu* 'mother,' Zuni *kʼanakʷayina* 'woman,' Yuki *aŋ-
kʼan* 'mother'; Hokan: Chumash *kunup* 'girl,' Diegueño *kux-kʷanʲ* 'mother,'
xe-kʷanʲ 'daughter,' Seri *kuãam* 'female,' *koŋkáii* 'wife,' Tonkawa *kʷān*
'woman,' Karankawa *kanin* 'mother,' Tequistlatec *(ɬ-)agaʔno* 'woman,

female'; Central Amerind: Proto-Tiwa *kʷiem 'maiden,' Papago hóoñigï
'wife,' Isthmus Zapotec gunáa 'woman'; Chibchan-Paezan: Boncota gïina
'female,' Ulua guana, Pedraza konui-xa 'daughter,' Choco huena 'woman,'
Paez kuenas 'young woman'; Andean: Simacu kaxkanu 'daughter-in-law,'
Yahgan čou-kani-kipa 'young woman,' Kulli kañi 'sister,' Cholon akiñiu,
Alakaluf ekin-eč 'woman,' Tsoneka na-kuna; Macro-Tucanoan: Nadobo
kuñan, Särä kana 'mother'; Equatorial: Yurucare igŭn 'girl,' ti-gŭn 'daugh-
ter,' Cuica kuneu-ksoy 'girl,' kunakunam 'woman,' Proto-Tupi *kuyã,
Guarani kuña 'female,' kuña-taĩ 'girl,' Guarayo ekuna 'woman,' Canoeiro
kuña-tain 'small girl,' Kamayura kunja 'woman,' Guahibo kvantua 'first
wife,' Amuesha kuyan-iša 'woman'; Macro-Carib: Palmella ena-kone
'mother,' Accawai kana-muna 'girl,' Muinane kɨni-ño, Miranya guaniu
'mother'; Macro-Panoan: Chama egʷan-asi 'woman,' Lengua iŋ-kyin
'mother,' Sanapana küli-guana-man 'old woman,' ?Chacobo huini 'fe-
male,' ?Cavineña ekwaʔa 'mother'; Macro-Ge: Suya kuña 'woman,' Cher-
ente pi-kon, Capaxo konjan, Caraja hanökö. [AM 272, P 283, H 164, LC 922,
AMN]

12 MAKO 'child'

?Niger-Congo: Bantu: Ngoala maŋku 'child,' Yaunde moŋgo, Pande maŋga,
    Mbudikum-Bamum muŋke. [HJ II: 271]
Indo-European: Proto-Indo-European *maghos 'young,' *maghu 'child,
    boy'; Iranian: Avestan maɣava 'unmarried'; Celtic: Old Irish macc 'son';
    Germanic: Gothic magus 'boy,' Old English magu 'child, son, man,' Swe-
    dish måg 'son-in-law'; Baltic: Latvian mač (gen. maǵa) 'small.' [IE 696,
    AB 371]
Dravidian: Tamil maka 'child, young of an animal, son or daughter,' Malay-
    alam makan 'son,' makkaḷ 'children (esp. sons),' Kota mog 'child,' Toda
    mox 'child, son, male, daughter,' Kannada maga 'son, male person,'
    makan 'son,' magu 'infant, child of either sex,' Kodagu makka 'children,'
    Tulu mage 'son,' magaḷu 'daughter,' Telugu maga 'male,' Konda moga
    koṟo 'boy child,' gālu 'daughter' (< *mgālu), Pengo gāṟ 'daughter,' Kuwi
    maka (vocative used to daughters and sisters in affection), Malto maqe
    'boy,' maqi 'girl,' maqo 'small, little, young,' maqu 'young of an animal.'
    [D 4616, AB 371]
Caucasian: Proto-Caucasian *mik'wV 'small, young one,' Proto-Avar-Andi
    *mok'i ~ *mik'i 'small, child,' Proto-Dido *mik'V 'small, little,' Proto-
    Lezghian *mik'ʷV 'young.' [C 151]
Sino-Tibetan: Tibeto-Burman: Proto-Tibeto-Burman *māk 'son-in-law,'
    Miri mak(-bo),' Burmese (sa-)mak, Lushei māk(-pa). [ST 324]
Indo-Pacific: Southwest New Guinea: Jaqai mak 'child,' Aghu amoko,
    Madinava imega(-kaivagu). [SWNG 12]

AMERIND: Almosan-Keresiouan: Natick *mukketchouks* 'boy,' Beothuk *maga-raguis* 'son,' Santa Ana *-ma'kə* 'my daughter,' Acoma *magə* 'girl,' Hidatsa *makadištamia*; Penutian: Cayuse *m'oks* 'baby,' Modoc *mukak*, Gashowu *mokheta* 'girl,' Santa Cruz *mux-aš*, Zuni *maki* 'young woman,' Yuki *muh* 'young,' Mixe *mahntk* 'son,' ?*miš* 'girl, boy'; Hokan: Achomawi *mik-tsan* 'child' (*-tsan* = dim.), Yana *ʔimx* 'young,' Washo *mèhu* 'boy,' Chumash (Santa Barbara) *mičamo* 'boy,' *amičanek* 'girl,' Chumash (Santa Ynez) *makčai* 'daughter,' *mak-isi-huanok* 'girl,' Cocopa *xmik* 'boy,' Walapai *mik*, Maricopa *maxay*, Yuman *maša-xay* 'girl,' Tequistlatec *(ɬa-)mihkano* 'boy'; Central Amerind: Tewa *mogè* 'young,' ?Otomi *metsi* 'boy'; Chibchan-Paezan: Cuna *mači(-gua)*, Ulua *muix-bine* 'child,' Chimila *muka* 'son-in-law,' *muka-yunkvir* 'daughter,' Shiriana *moko* 'girl,' Nonama *mukua* 'daughter,' *mučaira* 'son'; Andean: Yahgan *maku* 'son,' *makou-esa* 'daughter-in-law,' Yamana *māku-n* 'son'; Macro-Tucanoan: Yeba *mãkẽẽ* 'child,' *yimaki* 'son,' Waikina *maxkẽ* 'child,' *mehino* 'boy,' Dyurumawa *(ma-)maki* '(small) child,' Coto *ma-make* 'boy,' Tucano *muktuia* 'boy, girl,' *vimago* 'girl,' *dyemaxkĩ* 'child,' Curetu *si-magö* 'daughter,' *si-mugi* 'son,' Waiana *yemakə* 'daughter,' Ömöa *yemaxke* 'son,' Ticuna *mākan* 'child,' Desana *mague* 'son,' Auake *makuamẽ*, Waikina *make*; Equatorial: Mehinacu *yamakui* 'boy,' Paumari *makinaua* 'boy, young,' *-makhini* 'grandson,' Marawan *makibmani* 'boy,' Uru *mači* 'daughter,' Caranga *mač* 'son,' Oyampi *kunyã-muku-* 'girl,' Maue *makubdia*, Tambe *kusa-muku* 'young woman'; Macro-Carib: Yabarana *mūku* 'boy,' Galibi *magon* 'young of animals,' Cumanagote *miku* 'child,' Pavishana *mu'gi* 'daughter,' Taulipang *muku* 'son,' Accawai *mogo*; Macro-Panoan: Tiatinagua *mahi*; Macro-Ge: Apinage *mäaukride* 'girl,' Ramkokamekran *mäggepru*, Coroado *meke-šambe* 'son.' [AM 62, AMN]

13 MALIQ'A 'to suck(le), nurse; breast'

AFRO-ASIATIC: Proto-Afro-Asiatic: **mlg* 'breast, udder, suck,' Arabic *mlǧ* 'to suck the breast,' Old Egyptian *mnd̠* (< **mlg*) 'woman's breast, udder'; Cushitic: Somali *maal-* 'to milk,' Rendille *maạl-*. [N 291, LN 291]

INDO-EUROPEAN: Proto-Indo-European **melĝ-* 'to milk'; Greek *ἀμέλγω*; Italic: Latin *mulg-ēre*; Celtic: Irish *bligim* 'to milk,' *mlicht* 'milk'; Germanic: Gothic *miluks* 'milk,' Old Norse *mjolka* 'to milk,' English 'to milk, milk'; Baltic: Lithuanian *milžti* 'to milk'; Slavic: Old Church Slavic *mlĕsti*; Albanian *mjellë*; Tocharian: Tocharian A *mālk-lune* 'milking,' *malke* 'milk,' Tocharian B *malk-wer* 'milk.' [IE 722]

URALIC: Proto-Uralic (Illich-Svitych) **mälγe* 'breast,' Proto-Finno-Ugric (Rédei) **mälke*; Saami *mielgâ* 'breast, chest,' Mordvin *mälhkä* 'breast,' Vogul *mägl* (with metathesis), Hungarian *mell*, Yukaghir *mełu-t*. [N 291, R 267]

Dravidian: Kurux *melkhā* 'throat, neck' and Malto *melqe* 'throat,' Tamil *melku* 'to chew, masticate,' Malayalam *melluka* 'to chew, champ,' Toda *meḷk* 'mouthful,' Kannada *mellu* 'to chew, masticate, eat with a muttering sound,' *melaku* 'bringing up again for rumination,' Telugu *mekku* 'to eat, gobble,' Gadba *mekkap-* 'to eat like a glutton.' [D 5077, 5080]

Eskimo-Aleut: Aleut *umlix* 'chest,' Kuskokwim *milugâ* 'sucks it out,' *mulik* 'nipple,' *milûgarâ* 'licks (or sucks) it; kisses it (a child).' [EU]

Caucasian: Proto-Caucasian **mVq'VlV* 'throat, larynx,' Proto-Avar-Andi **maq̄'ala* 'throat,' Proto-Dido **muq'*, Proto-Dargi **muq'luq'* 'chute, gutter.' [C 142]

Amerind: Almosan: Lower Fraser *məlqʷ* 'throat,' Nootka *ṁukʷ* 'swallow,' Kwakwala *ṁḷχʷ-ʔid* 'chew food for the baby,' *ṁḷqʷa* 'moisten the fingers with the tongue,' Heiltsuk *ṁelqva* 'chew food for baby,' *ṁelχv-baút* 'lick the end of something,' Yurok *mik'olum* 'swallow,' Kutenai *uʔmqoɬ*; Penutian: Chinook *-mókuɪ̄-* 'throat,' *mlqʷ-tan* 'cheek,' Wishram *ō-mēqλ* 'lick'; Oregon: Takelma *mülk'* 'swallow,' Tfalatik *milq*, Kalapuya *malq-mat* 'lick'; Yokuts *mōk'i* 'swallow,' *mik'-is* 'throat,' Mixe *amuʔul* 'suck,' Zoque *muʔk*; Hokan: Yuma *malʲaqé* 'neck,' Walapai *malqi'* 'throat, neck' Havasupai *milqé* 'throat,' Yavapai *melqí* 'neck,' Mohave *malʲaqé* 'throat,' Akwa'ala *milqí* 'neck,' Paipai *milqí*; Chibchan: Cuna *murki-makka* 'swallow,' *murgi murgi sae* 'swallow food'; Andean: Quechua (Cochabamba) *malq'a* 'throat,' Quechua (Huaraz) *mallaqa* 'be hungry'; Aymara *maλq'a* 'swallow, throat' (a borrowing from Quechua?) Equatorial: Guamo *mirko* 'drink.' [P 239, AMN; this etymology is explored in greater detail in Chapter 11.]

14 MANA 'to stay (in a place)'

?Nilo-Saharan: Tatoga *miṅ* 'to stand,' Shabo *maŋ-ka* 'to sit.' [NSB, HF 12]

Afro-Asiatic: Proto-Afro-Asiatic **mn* 'to remain, be firm'; Ancient Egyptian *mn* 'to remain,' Coptic *mun*; Semitic: Proto-Semitic **'mn* 'to be firm, safe,' Arabic *'munu* 'to be loyal to someone,' *'manu* 'to be safe,' Geez *'mn* 'to be faithful,' Syriac *'amīn* 'firm,' Classical Hebrew *(n-)'mn* 'to be permanent, safe'; Omotic: Gofa *min* 'to be firm, strong'; Cushitic: Oromo *manā* 'house, home,' Somali *mīn*; Chadic: Musgu *mine* 'to be.' [CS 38, N 287, UOL 192]

?Kartvelian: Georgian *mena* 'dwelling' (possibly a borrowing from Iranian languages). [N 287]

Indo-European: Proto-Indo-European **men* 'to remain'; Indic: Sanskrit *man* 'to linger, not budge from a place'; Iranian: Old Persian *man* 'to remain, wait for'; Armenian *mnam* 'I remain, wait for'; Italic: Latin *man(-ere)* 'to remain'; Tocharian: Tocharian A *mñe* 'waiting,' *mäsk* (< **men-sk*) 'to be.' [IE 729, N 287, UOL 192]

DRAVIDIAN: Proto-Dravidian *man* 'to remain in a place,' Brahui *manning* 'to become, be,' Malto *mene*, Kurux *mannā*, Kuwi *man* 'to be, remain, stay,' Konda *man* 'to be, stay, dwell,' Parji *men* 'to be, stay,' Telugu *manu* 'to live, exist,' *mannu* 'to last, be durable,' Malayalam *mannuka* 'to stand fast,' Tamil *maṉṉu* 'to be permanent, remain long, stay.' [D 4778, N 287]

TUNGUS: Evenki *mā̄nā̄* 'to live settled, stay in camp for a long time in one place,' Negidal *mänäğä* 'to remain.' [N 287]

CAUCASIAN: Proto-Caucasian *ʔi-ma(n)-* 'to stay, be,' Hurrian *mann-* 'to be.' [NSC 111]

BASQUE *min* 'to place, set up, settle.'

BURUSHASKI *mʌn(-ʌs)* 'to be, become.' [B 257]

INDO-PACIFIC: South New Guinea: Makleu *man* 'to sit,' Jab *mön*; Central New Guinea: Siane *min* 'to stay, sit,' Gende *mina* 'stay,' Mogei *mana(-munt)* 'to sit,' Kuno *amen(-nyint)*; Northeast New Guinea: Langtub *min* 'to stay'; Unclassified New Guinea: Waruna *mana* 'to dwell,' Gogodala *mana* 'to sit, stay.' [IP 65]

AMERIND: Almosan-Keresiouan: Nootka *ma-* 'dwell'; Penutian: Tsimshian *mān* 'remain,' Kalapuya *mānɨ-* 'wait,' Maidu *ma* 'be,' Zuni *ʔīma* 'sit'; Hokan: Subtiaba *-ama*; Chibchan-Paezan: Cacaopera *ima* 'wait,' Puruha *ma* 'be,' Timicua *-ma* 'inside'; Andean: Cholona *-man* 'in,' Aymara *mankxa* 'inside,' Araucanian *minu*, Quechua *ma-* 'be,' Yahgan *mani* 'be,' *jumanana* 'live,' *möni* 'remain,' *kamani* 'stand'; Equatorial: Dzubucua *mañe* 'remain,' Otomi *yamania* 'live,' Paumari *gamanani* 'stand,' Coche *xamnan* 'be'; Macro-Carib: Yameo *mune* 'sit down,' Ocaina *mūnʔxo* 'remain,' Apiaca *umano* 'wait'; Macro-Panoan: Cashinawa *mana*, Shipibo *manei* 'remain,' Chacobo *man-* 'wait,' Panobo *manai*, Lule *-ma* 'in'; Macro-Ge: Botocudo *mēn* 'remain,' Crengez *moinj* 'to sit,' Capoxo *moinjam*, Bororo *am̄u* ∼ *am̄i* 'to rest,' Cayapo *kaimaniun* 'stand,' *kaman* 'inside,' Tibagi *ema* 'dwell,' [AM: G46, A 59, MG 99, AMN]

15 MANO 'man'

?NIGER-CONGO: Bantu: Mbudikum-Bamum *-mani* 'man,' Rwanda *mana*, Nyanja *-muna*, Ci-ambo *-mna*.

NILO-SAHARAN: East Sudanic: Me'en *mɛʔɛn-* 'person,' Maban *mɛṉṉu*, Tama *ma*, Ik *am*, Didinga *mat^s* 'male,' Merarit *mo*, Dinka *mot^s*, Maban: Mabang *ma-šu* 'person.' [ES70, NSB]

AFRO-ASIATIC: Proto-Afro-Asiatic *mn* 'male, man, person'; Ancient Egyptian *mnw* 'Min, a phallic deity,' Old Egyptian *mnyw* 'herdsman'; Omotic: Wolamo *minō* 'warrior,' Janjero *monō* 'people'; Cushitic: Proto-Cushitic *mn* 'man,' Burji *méen-a* 'people,' Somali *mun* 'male,' Hadiyya *manna* 'people,' *man-čo* 'person,' Tembaro *mana*, Iraqw *ameni* 'woman'; Berber:

Zenaga *uman* 'kin,' Ghadames *iman* 'person,' Zwawa *iman*, Qabyle *iman*;
Chadic: Proto-Chadic **mn(j)* 'man,' Proto-West Chadic **mani* 'man, hus-
band,' Karekare *men* 'people,' Kanakuru *minja*, Bata *māno* 'man,' Musgu
muni 'woman,' Logone *mēni* 'man, person,' Dari *mānji* 'person.' [AA 78,
N 292, OS 801, LN 292]

INDO-EUROPEAN: Proto-Indo-European **manu(-s)* ∼ **monu(-s)* 'man'; Indic:
Sanskrit *mánu* ∼ *mánuṣ* 'man, person'; Iranian: Avestan **manus* 'man';
Germanic: Gothic *manna*, Old High German *man,* English man (pl. men),
woman (< wife + man); Slavic: Old Church Slavic *mǫžǐ* (< **mon-g-jo-*),
Russian *muž* 'husband.' [IE 700, N 292]

URALIC: Proto-Uralic (Illich-Svitych) **mäńće* 'man, person'; Ugric: Vogul
mɛ̈ńći ∼ *mańśi* (self-name), Ostyak *mańt'* ∼ *mońt'* ∼ *məś* ∼ *maś* (self-
name of one Ostyak clan), Hungarian *magyar* (self-name); Finnic: Finnish
mies, Estonian *mees.* [U 114, N 292]

DRAVIDIAN: Kolami *mās* 'man,' *māc* 'husband,' *māca* 'wife,' Naikri *mās*
'man,' *māsal* 'woman,' Naiki *mās* 'husband,' *māsa* 'wife,' Parji *mañja* ∼
mañña 'man,' Gondi *manja* 'man, person,' Konda *māsi* 'husband,' Kurux
mē̃t ∼ *mēt* 'adult man, husband,' Tamil *māntar* 'people, men.' [D 4791;
Illich-Svitych's comparison (N 292) is with D 4774: Tamil *maṉ* 'king, chief, husband,'
etc. The two are probably related.]

JAPANESE-RYUKYUAN: Old Japanese *(wo-)mina* 'woman' (mod. *onna*). [SY]

AINU *meno(-ko)* ∼ *mene(-ko)* 'woman.'

CAUCASIAN: Proto-Caucasian **mVnxV* 'man, male.' [NSC 116]

YENISEIAN: Proto-Yeniseian **pix-* 'man.' [NSC 116]

INDO-PACIFIC: Bilakura *munan* 'man,' Warenbori *mando*, Osum *aminika*
'woman,' Ikundun *mundu* 'man.' [FS 92, 93, 106]

NAHALI *mancho* ∼ *manco* 'man,' *man-ṭa* 'men.' [NA 89]

MIAO-YAO: Proto-Miao-Yao **hmən* 'person,' Miao *hmoŋ* ∼ *hmuŋ* (self-name
of the Miao), Yao *man* ∼ *myen* ∼ *mun* (self-name of the Yao). [PB 336]

AMERIND: Almosan-Keresiouan: Bella Coola *man* 'father,' Pentlatch *mān*,
Squamish *man*, Blackfoot *no-ma* 'husband'; Penutian: Coos *ma* 'per-
son,' Kalapuya *menami*, Nisenan *manai* 'boy,' Rumsien *ama* 'person,'
Hokan: Chumash *s-mano* ∼ *ł-mano* 'man'; Chibchan-Paezan: Ayoman
ayoman 'husband,' Warrau *moana* 'people'; Andean: Iquito *komano* 'fa-
ther,' Yahgan *imun-* 'father,' *yamana* 'person'; Macro-Tucanoan: Yahuna
meni 'boy,' *manehẽ* 'husband,' Yupua *manape̜*, Yuyuka *yemane*, Coto
ömuna 'man,' Proto-Nambikwara **mĩ̄n* 'father,' Kaliana *mĩñõ* 'man, per-
son,' *imone* 'father-in-law,' Wanana *meno* 'man,' *manino* 'her husband,'
Waikina *emeno* 'man'; Equatorial: Guahibo *amona* 'husband,' *itsa-mone*
'person,' Callahuaya *mana*, Achual *aišman* 'man,' Marawan *maki-b-mani*
'boy,' Chamicuro *θamoni* 'my father,' Manao *re-manao* 'person,' Proto-

Tupi *men 'husband,' Guarani *mena,* Guajajara *man*; Macro-Carib: Apiaca *moni* 'boy,' Ocaina *moon* 'father,' Paravithana *mei-moen* 'son,' Miranya *itse-meni*; Macro-Panoan: Moseten *moinči* 'person,' Charrua *itojman* 'boy,' Guana *emmanabie* 'man'; Macro-Ge: Cayapo *män* 'person,' *miän* 'husband,' Chicriaba *aimaman* 'boy,' *mamaŋ* 'father,' Coroado *kuoyman* 'man.' [AM 154, AMN]

16 MENA 'to think (about)'

?KHOISAN: Sandawe *mě:na* 'to like.'

NIGER-CONGO: Fulup -*maman* 'know,' Mambila *mini* 'think,' Malinke *mɛn* 'understand,' Bambara *mɛ*, Proto-Bantu **màni* ∼ **mèni* ∼ **mèny* ∼ **màn* 'know,' Namshi *meĩ*, Ibo *ma*, Mandyak *me*. [NC 28, KS 45, BA IV: 8, 12]

KORDOFANIAN: Tumale *aiman* 'think.' [NK 41]

NILO-SAHARAN: Songhai *ma* 'understand,' Daza *monər* 'know,' Dinik *mái*, Lotuko *mij*, Proto-Daju **minaŋe* 'to dream,' Shatt *miniŋ*, Ik *miin-es* 'to love,' Teso *a-min*. [KS 45, NSB, KER]

AFRO-ASIATIC: Proto-Afro-Asiatic **man* 'think, understand, wish, desire, count'; Semitic: Sokotri *mnj* 'wish,' Tigrinya *tämännäjä*, Arabic *mnw* 'understand,' Hebrew *mānāh* 'count,' Akkadian *manū*, Aramaic *mənā*; Cushitic: Somali *mān* 'mind'; Chadic: Angas *man* 'know,' Boleva *mon*, Masa *min* 'wish.' [N 281, AB 348]

INDO-EUROPEAN: Proto-Indo-European **men* 'to think'; Anatolian: Hittite *me-ma-a-i* (< **me-mn-eA-*) 'to say'; Italic: Latin *men(s)* 'mind,' *meminī* 'to remember,' *mon(-ēre)* 'to remind, warn'; Indic: Sanskrit *mányatē* 'to think,' *mánas* 'mind'; Greek *mimnēskein* 'to remember'; Germanic: Gothic *munan* 'to think,' *muns* 'thought'; Baltic: Lithuanian *menù*, *miñti* 'to remember'; Slavic: Old Church Slavic *mĭněti* 'to count,' *pa-mestĭ* 'mind, memory'; Albanian *mund* 'I can'; Armenian *i-manam* 'I understand'; Tocharian: Tocharian A *mnu* 'thought,' Tocharian B *mañu* 'wish (n.), desire (n.).' [IE 726, N 281, AB 348]

URALIC: Proto-Uralic (Illich-Svitych) **manV* ∼ **monV* 'guess, speak, conjure,' (Rédei) **monʒ̊* 'say'; Yukaghir *mon*; Samoyed: Yurak *maan*, Tavgy *muno* 'say, command'; Ugric: Hungarian *mon(-d)* 'say'; Finnic: Finnish *manaa* 'to warn, admonish, curse, bewitch,' Estonian *mana* 'abuse, curse,' Saami *moanâ* 'to conjecture,' Mordvin *muńa* 'bewitch,' Cheremis *mana* 'speak, order.' [U 53, N 281, AB 348, KR 290]

DRAVIDIAN: Tamil *maṉu* 'prayer, request, word,' Kannada *manuve* 'request,' Telugu *manavi* 'prayer, humble request,' Irula *maṇi* 'talk, speak,' Kota *mayṉ-* 'talk, scold, abuse.' [D 4671, 4775, N 281]

?TURKIC: Turkish *mani* 'folk song,' Crimean Turkish *manä* 'folk song, melody.' [LN 281]

Basque *mun* 'medulla,' *munak* (pl.) 'brains.' [LC 916]

?Burushaski *minʌs* 'story, tale.' [B 506]

?Sino-Tibetan: Tibeto-Burman: Proto-Tibeto-Burman **r-miŋ* 'name,' Tibetan *miŋ,*' Magari *armin,* Limbu *miŋ,* Garo *miŋ* 'to name,' Burmese *mań* 'to be named,' Mikir *mon* 'mind,' *mun-tʻi* 'to think, understand, guess, assume, appreciate,' Midźu *moŋ* 'to summon.' [ST 83] Cf. also Proto-Tibeto-Burman **maŋ* 'dream,' often in composition with Proto-Tibeto-Burman **ip* 'sleep,' as in Nung *ip-maŋ* 'to dream,' Burmese *ip-mak* 'dream,' *hmaŋ(-tak-mi)* 'to be possessed (applied to somnambulism).' [ST 82]

Amerind: Almosan-Keresiouan: Shawnee *menw* 'prefer, like,' Laguna *amū* 'love,' Catawba *muʔe* 'wish,' Thompson *iomin-* 'have friendly feelings,' Okanagan *iqamēn* 'love,' Kalispel *x̄amenč,* Spokane *-manən* 'wish,' Nootka *māna* 'try, test'; Penutian: Lake Miwok *mēna* 'think,' *menaw* 'try,' Bodega Miwok *munu* 'be hungry,' Patwin *meina* 'try'; Hokan: Chimariko *miʔinan* 'like,' Karok *ʔīmnih* 'love'; Central Amerind: Chichimec *men,* Mixtec *manī*; Chibchan-Paezan: Chimila *mojnaya* 'wish,' Binticua *meyuno* 'seek,' Timucua *mani* 'wish,' Andaqui *miña-za* 'I sought,' Colorado *munai* 'love,' *muna-ha* 'wish'; Andean: Araucanian *mañumn* 'love,' Aymara *muna,* Sabella *mẽ-* 'seek,' Cholona *men* 'wish,' Quechua *muna*; Equatorial: Otomi *manenianda* 'love,' *momene* 'think,' Baure *emeniko* 'love,' Kamayura *emanhau*; Macro-Panoan: Lengua *min-* 'wish,' Mataco *hemen* 'love,' Vejoz *humin,* Mascoy *emeni,* Caduveo *addemane* 'do you love me?'; Macro-Ge: Kamakan *mã* 'seek,' Krẽye *mã-* 'wish, love,' Apinage *amnõnmõn* 'think.' [AM 270, AMN]

17 MI(N) 'what?'

Khoisan: ≠Au.//eî *kama* 'if, when,' G//abake */kam* 'when,' Naron *kama* 'if, when,' Nama *hamo* 'when,' *maba* 'where,' Kxoe *ma* 'who, which,' /Nu-//en *maba* 'where.' [SAK 384, 757, 758, UOL 71]

Afro-Asiatic: Proto-Afro-Asiatic **m(j)* 'what, who'; Semitic: Akkadian *mīn* 'what,' *mann* 'who,' *man-ma* 'whoever,' Geez *mi* 'what,' Amharic *mɨn* 'what,' Arabic *man* ∼ *min* 'who,' *mah-mā* 'whatever,' Aramaic *man* 'who,' Classical Hebrew *mī*; Ancient Egyptian *m(j)* 'who,' *m* 'what'; Berber: Tuareg *ma* 'what,' *mi* 'who,' Shilha *ma(t)* 'who, what,' *mīt* 'who'; Cushitic: Proto-East Cushitic **maʔ* 'what,' Saho *mi* 'who,' *mā* 'what,' Somali *máḥâ* 'what,' Oromo *mā́ni* 'what,' *-mi* (interrogative particle), Sidamo *ma* 'what,' Darasa *ma* 'what,' *māta* 'who'; Omotic: Kaffa *amone* 'what,' Mocha *ámo,* Alagwa *mi* 'what,' *miya* 'who'; Chadic: Hausa *mè̀* ∼ *mì̀* 'what,' Karekare *mija,* Margi *mì,* Bata *mən,* Ngala *mena,* Logone *mini* 'who,' Sokoro *-ma* (interrogative particle). [AA 77, N 300, UOL 71, LN 300]

KARTVELIAN: Proto-Kartvelian *ma ∼ *maj 'what,' *mi-n 'who,' Georgian
    ma 'what,' win 'who,' win-me 'whoever,' Chan mu 'what,' min 'who,'
    Svan maj 'what.' [KA 124, 135, N 300, UOL 71]

INDO-EUROPEAN: Proto-Indo-European *mo- (base of interrogative adverbs);
    Anatolian: Hittite ma-ši-š 'how much,' maḫḫan 'when,' Luwian mān, Hi-
    eroglyphic Hittite mana 'if, when'; Celtic: Old Irish má 'if,' Middle Breton
    ma 'what'; Tocharian: Tocharian A mänt 'how.' [N 300, EU]

URALIC: Proto-Uralic (Illich-Svitych) *mi 'what,' (Rédei) *mɛ; Yukaghir me-
    neme 'something'; Samoyed: Tavgy ma 'what,' Yenisei Samoyed mii', Ka-
    massian mo 'why'; Ugric: Vogul män 'which, what,' Hungarian mi 'what,
    which'; Finnic: Finnish mi ∼ mi-kä, Saami mi ∼ mâ, Cheremis ma ∼ mo,
    Votyak ma 'what.' [U 54, N 300, EU, R 296]

?DRAVIDIAN: Kajkadi midā 'what,' Burgendi mī, Tamil (even-)um
    '(who)ever.' [N 300, UOL 71]

TURKIC: Proto-Turkic *mi 'what,' Chuvash měn 'what,' miśe 'how much,'
    měnle 'what kind of,' Old Uighur mu ∼ mü (sentence question enclitic),
    Turkish mi (sentence question enclitic). [N 300, EU]

MONGOLIAN: Mongolian -ū (< *wu < *mu) (sentence interrogative), Monguor
    amu ∼ ama 'what.' [EU]

TUNGUS: Tungus -ma (indefinitizer), (ēku-)ma '(what)ever.' [EU]

KOREAN muõt 'what,' mjet 'how much,' Old Korean mai 'why.' [EU]

JAPANESE-RYUKYUAN: Ryukyuan mī 'what,' -mi (sentence interrogative en-
    clitic). [EU]

AINU mak ∼ makanak 'what,' makan 'what kind.' [EU]

CHUKCHI-KAMCHATKAN: Proto-Chukchi-Kamchatkan *m-ənqV 'what,' *m-
    ke 'who,' *maʔ 'when,' *miŋ 'which,' Chukchi mikin 'who', mi-k 'where,'
    Kamchadal min 'which, what sort.' [EU, CK]

CAUCASIAN: Proto-Caucasian *ma (interrogative particle), Chechen mila
    'who,' Bats me. [KA 135]

BURUSHASKI mɛn 'who,' amin 'which,' mɛn (. . . kɛ) 'who(ever).' [L 265]

YENISEIAN: Proto-Yeniseian *wi- ∼ *we- 'what.' [Y]

INDO-PACIFIC: Andaman Islands: Biada min 'thing,' Bale ming; Central
    Melanesian: Laumbe mina, Reef (kele)mengge 'this (thing)'; North New
    Guinea: Nyaura məndə 'thing, what,' Arapesh mane 'what'; Southwest
    New Guinea: Kati man 'something'; Central New Guinea: Matap mina
    'what.' [IP 75]

AUSTRALIAN: Proto-Australian *minha ∼ *minya 'what,' Dyirbal minya,
    Pitta-Pitta minha, Gumbaynggir minya, Malyangapa minhaga, Yota-Yota
    minhe, Diyari minha. [RD 373, 376]

NAHALI miŋgay 'where,' miyan 'how much.' [NA 91]

Austroasiatic: Munda: Kurku *amae* 'who,' Mundari *ci-mae* 'why'; Mon-Khmer: Mon *mu* 'what,' Sakai *ma'*, *āmai* 'who,' Central Sakai *mō, mā* 'what.' [NA 91, UOL 71]

Amerind: Almosan-Keresiouan: Kwakwala *m'as* 'what,' Mandan *mana* 'who,' *matswɛ* 'what,' Tutelo *mã?tu* 'when'; Penutian: Siuslaw *mînč*, North Sahaptin *mɛ̄n* 'where,' *mūn* 'when' *miš* 'how, why,' Nez Perce *mana* 'what,' *mine* 'where,' *maua* 'when,' Patwin *mena* 'where,' Central Sierra Miwok *manaχ-* 'who,' *mičy* 'do what,' Northern Sierra Miwok *mini* 'where,' *mi-tan* 'when,' Bodega Miwok *manti* 'who,' San Jose Costanoan *mani* 'where,' San Francisco Costanoan *mato* 'who,' Chitimacha *?am* 'what,' Atakapa *ma* 'where,' Choctaw *mano* 'when,' *imato* 'where,' Yuki *im* 'who,' Coast Yuki *im* 'where,' Wappo *may* 'who,' Chontal *max*, Yucatec *ma-š*, Tzeltal *mač'a*, Jacaltec *matˢ(a)*; Hokan: Yana *?ambi*, East Pomo *am*, Chumash *muski*, Cocopa *makaya* 'where,' Diegueño *maap* 'who,' *ma?yum* 'when,' *maay* 'where,' Mohave *makač* 'who,' *maki* 'where,' Yuma *meki*, Maricopa *mekyenye* 'who,' *miki* 'where,' Akwa'ala *mukat* 'who,' Karankawa *muda* 'where'; Central Amerind: Mazatec *hme* 'what'; Chibchan-Paezan: Tarascan *ambe*, Guamaca *mai* 'who, how,' Kagaba *mai* 'who,' *mani* 'where,' *mitsa* 'when,' *mili* 'which,' Cacaopera *ma(-ram)* 'where,' Matagalpa *man*, Bribri *mĩk* 'when,' Sumu *manpat*, Cabecar *mãnẽ* 'which,' Move *ama* 'where,' Chimila *miki* 'who,' *muru* 'when,' *me-ma* 'to where,' *me-k* 'from where,' Guambiana *mu* 'who,' Totoro *man* 'how many,' Paez *manč* 'when,' *manka* 'where,' *manzos* 'how often,' *mants* 'how many,' *mau* 'how,' Cayapa *muŋ ∼ maa* 'who,' Allentiac *men*, Catio *mai* 'where,' Colorado *moa* 'who,' *matuši* 'when'; Andean: Sek *xam-anmi* 'where,' Jebero *ma?* 'what,' Cahuapana *ma-e* 'what,' *impi* 'when,' Quechua *ima* 'what,' *may* 'where'; Equatorial: Guamo *miku* 'what,' Yurucare *ama* 'who, which,' Tinigua *mné'á* 'who,' Yuruna *mane*, Paumari *-mani-* (interrogative), Candoshi *maya* 'what,' Esmeralda *muka*, Timote *mape* 'when,' Turiwara *maape* 'when, where,' Saliba *imakena* 'when,' Tuyoneri *menoka* 'when,' *me-yo* 'where,' Guajajara *mɔn* 'who,' Guayaki *ma* 'what, how,' Guarani *mba'e* 'what,' *mamo* 'where,' Cofan *mã-ni*, Maripu *manu(b)* 'in which direction,' Kandoshi *maja* 'what'; Macro-Carib: Witoto *mika*, Miranya *mukoka* 'when,' *mu* 'whose,' Witoto-Kaimö *muka* which'; Macro-Panoan: Nocten *emetta* 'what,' *mequie* 'when,' Toba-Guazu *mi* 'who'; Macro-Ge: Caraho *ampo* 'what,' *manẽno* 'when,' *ampô-mẽ* 'which,' Puri *ya-moeni* 'when,' Aponegicran *muena* 'what,' Cayapo *mā* 'where,' Umutina *mašika* 'where,' *matuni* 'why,' Krẽye *menõ* 'who,' *ampô-ny* 'why,' Botocudo *mina* 'who.' [AM: G103, AMN]

18 PAL '2'

NIGER-CONGO: Temne *(kə)bari* 'twin,' Mano *pere* '2,' Nimbari *bala*, Daka
   bara, Proto-Bantu **bàdí* ∼ **bìdí* '2,' **bádì* 'side.' [NC 48, KS 76, UOL 92,
   BA III: 21, 22, 43]

NILO-SAHARAN: Nubian *bar(-si)* 'twin,' Merarit *wírre* '2,' Kunama *báarè* '2,'
   ibā 'twin,' Maba *mbar* '2,' Mesalit *mbarrá*, Tama *warri*, Baka *brūe*, Ilit
   ball-ame. [ES 119, KS 76, UOL 92, NSB]

AFRO-ASIATIC: Omotic: Kafa *barā* 'other,' Mocha *baro*, Dime *bal*; Cushitic:
   Saho *baray* '2nd,' Oromo *bíra*; Chadic: Proto-Central Chadic **(kV-)bwVr*
   '2.' [VB]

INDO-EUROPEAN: Proto-Indo-European **pol* 'half, side'; Indic: Sanskrit
   (ka-)palam 'half'; Albanian *palë* 'side, part, pair'; Slavic: Old Church
   Slavic *polŭ* 'side, half,' Russian *pol* 'half.' [IE 802, 986, IS 356]

URALIC: Proto-Uralic (Illich-Svitych) **pälä* ∼ *pole* 'half,' (Rédei) **pälä* 'half,
   side'; Samoyed: Yurak Samoyed *peele* 'half,' Selkup *pɛle*, Kamassian *pjeel*
   'half, side'; Ugric: Hungarian *fél* ∼ *fele* 'half, (one) side (of two),' Vogul
   pääl 'side, half'; Finnic: Saami *bælle* ∼ *bæle* 'side, half, one of a pair,'
   Mordvin *pel'* 'side,' *pele* 'half,' Votyak *pal* 'side, half.' [U 67, IS 356, R 362]

DRAVIDIAN: Proto-Dravidian **pāl* 'part, portion,' Tamil *pāl* 'part, portion,
   share,' Malayalam *pāl* 'part,' Kannada *pāl* 'division, part,' Tulu *pālụ*
   'share, portion, part,' Telugu *pālu* 'share, portion,' Parji *pēla* 'portion.'
   [D 4097, IS 356]

INDO-PACIFIC: Andaman Islands: Biada *(ik-)pāūr(-da)* '2,' Kede *(ír-)pōl*,
   Chariar *(nér-)pól*, Juwoi *(ró-)pāūr*; New Guinea: Ndani *bere*, Sauweri
   pere; Tasmanian: Southeastern *boula* ∼ *bura*, Southern *pooalih.* [T 331,
   VB]

AUSTRALIAN: Proto-Australian **bula* '2,' Proto-Pama-Nyungan **(nyuN)palV*
   '(you) two,' **pula* 'they two,' Ngiyambaa *bulā* 'one of a pair.' [RD 356, BB
   7, 31]

AUSTROASIATIC: Proto-Austroasiatic **ʔ(m)bar* '2'; Munda: Santali *bar*, Kha-
   ria *(u-)bar*, *(am-)bar* 'you two,' Juang *ambar*, Remo *ʔmbār* '2'; Mon-
   Khmer: Khmu' *bār*, Bahnar *ʔbar*, Jeh *bal*, Old Mon *ʔbar*, Old Khmer
   ber, Sakai *hmbar*, Khasi *ār*, Riang *(k-)ār*, Palaung *ār* ∼ *a, par* 'you two,'
   Temiar *bər(-nar)* '2,' Central Nicobarese *ã.* [PB 135, UOL 94]

MIAO-YAO: Proto-Miao-Yao **(a)war* ∼ **(ə)wər* '2,' Proto-Miao **way*
   (< **war*), Proto-Yao **(w)i.* [PB 415]

DAIC: Mak *wa* 'twin,' Ong Be *von* '2.' [PB 415]

AUSTRONESIAN: Proto-Austronesian **kə(m)bal* ∼ **(ŋ)kə(m)bar* 'twin,' Ja-
   vanese *kĕbar* 'doubled,' *kĕmbar* 'twin,' Motu *hɛ-kapa* 'twins,' Roro *aka-
   bani* '8' (= 4-pair). [AN 76, WW 227, PB 415]

AMERIND: Penutian: Wintun *palo(-l)* '2,' Wappo *p'ala* 'twins,' Atakapa *hap-palst* '2,' Huave *apool* 'snap in two'; Chibchan-Paezan: Chiripo *bor* '2,' Xinca *bial ∼ piar*, Bribri *bul ∼ bur*, Cacaopera *burru*, Sanuma *-palo* (repetitive), *polakapi* '2,' Cayapo *palʲu*, Colorado *palu*, Atacameño *poya*; Andean: Quechua *pula* 'both,' Aymara *paja* '2,' Yamana *sa-pai* 'we-2' (*sa-* = 'thou'), Yahgan *(i-)pai* '(we) two'; Macro-Tucanoan: Tuyuka *pealo* '2,' Wanana *pilia*, Desana *peru*, Yupua *apara*, Proto-Nambikwara **p'āl(-in)*, Catuquina *upaua*, Hubde *mbeere*, Ticuna *peia*; Macro-Ge: Caraho *pa-* 'we-2-inc.' [AM 262, AMN]

19 PAR 'to fly'

NIGER-CONGO: Proto-West Sudanic **pil* 'to fly,' Serer *fol*, Same *pere*, Ewe *flò* 'to jump,' Yoruba *fò* 'fly,' Grebo *fri*, Igbo *fé*, Ijo *fin*. [KS 32]

NILO-SAHARAN: Dinka *par* 'to fly,' Nubian *fire* 'to flutter,' Teso *a-poror* 'to fly,' Teda *bur-ci* 'to jump,' Songhai *firi* 'to fly,' Ik *por-ɔn*, Maasai *-biri*, Majang *pir*. [KS 32, NSD 27, UOL 193, KER, HF 12]

AFRO-ASIATIC: Omotic: Proto-Omotic **pyaRR* 'to fly'; Ancient Egyptian *pʔ* 'to fly, flee'; Semitic: Aramaic *parr* 'flee,' Arabic *farra*, South Arabian *ferfir* 'wing,' Amharic *barrara* 'fly away, flee'; Cushitic: Beja *fār* 'jump, hop,' Boyo *firy* 'flee'; Berber: Shilha *firri* to fly,' Ait Izdeg *afru*; Chadic: Ankwa *p'ār* 'jump,' Angas *piar* 'jump, leap,' Buduma *fər* 'fly, jump.' [CS 366, AA 32, IS 346]

KARTVELIAN: Proto-Kartvelian **p'er* 'to fly,' Georgian *p'er*, Svan *p'er*; Proto-Kartvelian **prin* 'to fly,' Georgian *prin ∼ pren*, Mingrelian *purin*, Chan *purtin*. [KA 152, 190, IS 346]

INDO-EUROPEAN: Proto-Indo-European **(s)per* 'to fly'; Indic: Sanskrit *par-ṇá* 'feather'; Iranian: Avestan *parəna* 'feather, wing'; Slavic: Old Church Slavic *peroṣ* 'to fly,' *pero* 'feather.' [WP II: 21, IE 850, IS 346, EU]

URALIC: Yukaghir *perie* 'feathers,' *perienze* 'feathered,' *perień* 'have wings'; Proto-Uralic **parV* 'to fly'; Ugric: Ostyak *pɔr ∼ pur* 'to fly.' [IS 346]

DRAVIDIAN: Proto-Dravidian **parV ∼ *par̲V* 'to fly, run, jump,' Tamil *para* 'to fly, hover, flutter, move with celerity,' Malayalam *parakka* 'to fly, flee,' *para* 'bird,' *paru* 'flight,' Kota *parn-* 'to fly,' Toda *pōr̲*, Kannada *pār̲* 'to leap up, run, jump, fly,' Kodagu *pār* 'to fly, leap,' Telugu *paracu* 'to run away, flee,' *parika* 'a kind of bird,' Kui *pāsk* 'to fly,' Kuwi *prāḍ* 'to run away.' [D 4020, NSD 27, IS 346]

?TUNGUS: Evenki *hār* 'to soar.' [IS 346]

GILYAK *parpar* 'to hover, fly about.' [EU]

CAUCASIAN: Proto-Caucasian **pɨrV* 'to fly,' Proto-West Caucasian **pərə*, Ubyx *pərə*, Abkhaz *pɨr*; Proto-Lezghian **pVr-*, Udi *pur*, Archi *parx*, Proto-Avar-Andi **par-pV-*; Proto-Caucasian **părVpăɬV* 'butterfly, moth,'

Proto-West Caucasian *parəpalə 'moth,' Proto-Lezghian *pa(r)pal- 'but-
terfly.' [C 162, 167; KA 152, 190]

BASQUE *pimpirina* 'butterfly' (< *pir-pir-).

SINO-TIBETAN: Proto-Sino-Tibetan *phur ∼ *bhur 'to fly'; Archaic Chinese
*pjwər 'to fly'; Tibeto-Burman: Proto-Tibeto-Burman *pur ∼ *pir 'to
fly,' Tibetan 'phur-ba, Central Tibetan 'phir-ba, Nung əphr 'to shake,'
khoŋ-phr 'moth,' Garo bil 'to fly,' Dimasa bir, ?Bahing byer, ?Abor-Miri
ber. [ST 181, 398, NSC 152]

?INDO-PACIFIC: Baham *paru-baru* 'bird,' Kondo *boro*, Kare *purupuru*, Buna-
bun *piropir* 'butterfly.' [FS 8, 135]

NAHALI *aphir* 'to fly.' [NA 59; according to Kuiper this is a borrowing from
Kurku]

AUSTROASIATIC: Munda: Proto-Munda *apir 'to fly'; Mon-Khmer: Mon *pau*,
Khmer *par*, Bahnar *par*, Jeh *pal*, Vietnamese *bay*. [PB 482]

DAIC: Tai: Proto-Tai *ʔbin 'to fly,' Dioi *bin*; Sek *bɨl* ∼ *ʔbil*; Kam-Sui: Proto-
Kam-Sui *pwen ∼ *bwen, Kam *pen*, Sui *win* ∼ *vyen*, Mak *vin*; Lakkia
pon; Ong-Be *vin*. [PB 394]

AUSTRONESIAN: Proto-Formosan *(maq)baR 'to fly,' *(mi-)pəRpəR. [PB 394]

20 POKO 'arm'

?KHOISAN: Hadza *upukwa* 'leg, hind leg, foot,' *ufukwani* 'thigh.' [BD 247, 249]

NIGER-CONGO: Dagomba *boɣo* 'arm,' Gbaya *baxa*, Ewe *abo*, Zande *bo*,
Proto-Bantu *bókò, Sotho *le-boko* 'arm,' ?Wolof, Gbaya *buko* '10,' ?Mossi
piga, ?Tiv *puwə*, ?Grebo *pu*, ?Vere *bo*. [KS 4, NC 44, UOL 194]

NILO-SAHARAN: Bagirmi *boko* 'arm,' Baka *baka*, Berta *buá*, Didinga *iba*.
[KS 4, CN 3, UOL 194]

INDO-EUROPEAN: Proto-Indo-European *bhāghu(s) 'arm, forearm, elbow';
Indic: Sanskrit *bāhúḥ* 'arm'; Iranian: Avestan *bāzus*; Armenian *bazuk*
'forearm' (a loan from Iranian languages, according to Pokorny); Tochar-
ian: Tocharian A *poke* 'arm,' Tocharian B *pauke*; Greek *pakhus* 'elbow,
forearm'; Germanic: Old English *bōg* 'arm, shoulder, bough,' English
bough. [IE 108, UOL 194]

DRAVIDIAN: Kurux *pāknā* 'to take up into one's arms,' Malto *páke* 'to take
in the lap.' [D 4050]

MONGOLIAN: Proto-Mongolian *baɣu- 'upper arm.' [AD 20]

BURUSHASKI: Hunza *bʌɣu* 'double armful,' Werchikwar *bʌɣ'o* 'taking or em-
bracing in two arms.' [B 65, W 38]

YENISEIAN: Proto-Yeniseian *boq 'hand, palm.' [Y 28]

SINO-TIBETAN: Tibeto-Burman: Proto-Tibeto-Burman *pow ∼ *bow 'arm'
(cf. English *bough* for a similar phonetic development). [TB 442]

?INDO-PACIFIC: Andaman Islands: Bea *pag* 'claw,' Bale *poag*; Tasmanian

pögaréna 'shoulder'; New Britain: Sulka *paaga* 'fingernail'; West New
Guinea: Baham *pag*; North New Guinea: Nafri *faxa*; East New Guinea:
Amara *foka*; Unclassified New Guinea: Tate *faha* 'claw.' [IP 858]

NAHALI *boko* ∼ *bokko* 'hand.' [NA 74]

?AUSTROASIATIC: Semang *pāk* 'hand,' *ta-pak* 'to slap.' [NA 63]

DAIC: Tai: Proto-Tai *ʔba* 'shoulder'; Sek *va*; Kam-Sui: Mak *ha*; Ong-Be *bea*;
Li: Proto-Li *va*; Laqua *muə* 'shoulder' (< *mb(γ)a). [PB 378]

AUSTRONESIAN: Proto-Austronesian *(ʔa)-baγa' 'shoulder,' Proto-Formosan
*qa-baγa-(a)n, Proto-Oceanic *(qa-)paγa, Mukawa *kabara,* Paiwa *kavara*.
[AN 19, WW 187, PB 378]

AMERIND: Almosan-Keresiouan: Mandan *sūpaxe* 'arm,' Dakota *xupahu,* Bi-
loxi *sõpka* 'fin'; Penutian: Natchez *ilbak* 'hand,' Choctaw *ibbok* 'hand,
arm,' Chitimacha *pākta* 'armpit,' Totonac *paqniʔ* 'arm,' Huastec *pahāb*
'hand,' Quiche *sipax* 'give'; Hokan: Yana *dac-buku* 'arm,' Salinan *puku,*
Chumash *pu,* Cochimi *ginyakpak,* Mohave *hivipuk,* Havasupai *vuy-eboka,*
Subtiaba *paxpu*; Chibchan-Paezan: Shiriana *poko* ∼ *boko,* Cuitlatec *poxja,*
Jutiapa *paxa,* Chiquimulilla *pux* 'hand,' Xinca *pahal* 'arm,' Paya *bakapu*
'give,' Cayapa *pexpex* 'arm,' Colorado *pexpe,* Mura *apixi,* Chimu *pīk*
'give,' Puruha *pux*; Andean: Culli *pui* 'hand,' Simacu *bixi,* Allentiac
pux 'give,' Auca *po* 'hand,'; Macro-Tucanoan: Canamari *pöghy* 'hand,'
Papury *mbake,* Tiquie *(m)bake* 'arm,' Kaliana *kiǰapakuba,* Catauxim
ču-bakõ 'hand,' Proto-Nambikwara *pik'; Equatorial: Chamacoco *pukẽ*
'arm,' Turaha *pogo,* Camsa *buakua-ha,* Coche *buakwače* 'hand, forearm,'
Ramarama *i-pãŋua* 'arm,' Karif *bugalaga* 'armpit,' Omagua *poa* 'hand,'
Proto-Tupi *po, Yuracare *popo,* Kamaru *bo* 'arm,' Aruashi *bu* 'hand';
Macro-Carib: Muinane *ɔnɔ-bwɨkɨ* 'arm,' Mocoa *apo,* Ocaina *ooʔpo* 'hand,'
Tamanaco *(j-)apa(-ri)* 'arm,' Coeruna *(ko-)ipai*; Macro-Panoan: Chulupi
pakat 'hand,' Suhin *pakat-ai,* Sanapana *in-apheik,* Charrua *(is-)bax* 'arm,'
Toba *apige,* Chacobo *baš* 'elbow, forearm,' Proto-Tacanan *bai* 'arm';
Macro-Ge: Botocudo *po* 'hand,' Proto-Ge *pa* 'arm,' Kaingan *pe,* Chiq-
uito *(i-)pa,* Guato *(ma-)po*. [AM 7, MT 46, AMN]

21 PUTI 'vulva'

NIGER-CONGO: Mande: Malinke *butu* 'vulva,' Guro *buri,* Bobo-Fing *bido,*
Bisa *bid*; Bantu: Luganda *-butɔ* 'womb,' Kunda *-budu,* Swazi *-ŋgo-bɔti,*
Ki-sikongo *-buti*. [HJ, M]

NILO-SAHARAN: Songhai: Gao *buti* 'vulva,' Djerma *bute*; Koman: Ganza *pit,*
Koma *bitt*. [NS 145, NSD 59]

AFRO-ASIATIC: Proto-Afro-Asiatic *pwt 'hole, anus, vulva'; Omotic: Ganjule
pote 'vagina'; Semitic: Hebrew *pot* 'vulva' ("secret parts" in the King
James Version, Isaiah 3:17); Cushitic: Somali *fúto* 'anus,' Darasa *fīdo*

'genitals,' Oromo *fuği* 'vulva'; Chadic: Jegu *paate,* 'vulva,' *paato* 'penis,'
Angas *fut* 'hole.' [CS 381, IS 340, WM 64]

KARTVELIAN: Proto-Kartvelian **put'* 'hole,' Svan *put'u.* [IS 340]

INDO-EUROPEAN: Proto-Indo-European **puto* 'cunnus'; Indic: Sanskrit *pŭ-
tau* 'buttocks'; Italic: Vulgar Latin **putta* 'girl,' Old French *pute* (mod.
putain) 'whore,' Provençal *puta(-na),* Spanish *puta*; Germanic: Old Ice-
landic *fuð* 'cunnus,' Middle High German *vut* 'vulva,' Swiss German *fotz*
∼ *fotza,* Swedish *fitta, fod* 'rear end' (dialectal). [WP II: 21, IE 848, SM 1013]

URALIC: Proto-Uralic (Illich-Svitych) **putV* 'rectum,' (Rédei) **putᴈ* 'rectum,
colon'; Ugric: Ostyak *pŭti* 'rectum'; Finnic: Saami *buttĕgĕ.* [U 91, IS 340,
R 410]

DRAVIDIAN: Brahui *puṇḍū* 'anus, buttocks,' *pōs* 'vulva,' Tamil *puṇṭai* 'vulva,'
pūṟu ∼ *pīṟu* 'anus,' *poccu* 'vulva, anus,' Malayalam *pūṟu* 'buttocks, vulva,'
Kannada *pucci* 'vulva,' Telugu *pūḍa* 'anus,' Tulu *pūṭi* 'vulva,' Kodagu
purï, Kota *piḍ,* Toda *pïḍy* 'penis,' Kuwi *putki.* [D 4273, 4379, 4476, NSD 59]

MONGOLIAN: Middle Mongolian *hütü-gün* 'vulva.'

JAPANESE-RYUKYUAN: Old Japanese *pʰɔto* 'vulva' (mod. *hoto*). [SY]

ESKIMO-ALEUT: Proto-Eskimo-Aleut **putu* 'hole.' [EA]

CAUCASIAN: Proto-Caucasian **pŭt'i* 'genitals (mostly female),' Proto-Nax
*but' 'vulva,' Proto-Avar-Andi **but'a,* Proto-Lak **put'i* 'tube,' Proto-
Dargi **put'i* 'anus,' Proto-Lezghian **p̄ot'* 'penis.' [C 168]

BASQUE *poto-rro* 'pubis, vulva.'

?AUSTRALIAN: Luridya *pudă* 'vulva.' [VB]

?AUSTRONESIAN: Proto-Austronesian **betik* 'vagina,' **puki* 'vulva' (< **puti*
?; cf. East Rukai *pati* 'vulva'), Ami *puki,* Tsou *buki* 'penis.' [AN 121, WW
231, 233, PB 417]

AMERIND: Almosan-Keresiouan: Delaware *saputti* 'anus,' Mohegan *sebud,*
Wiyot *beš* 'vagina,' Upper Chehalis *-pš* 'anus'; Penutian: Chinook *puč,*
Yaudanchi *poto* 'penis,' San Juan Bautista *lapus* 'anus,' Southern Sierra
Miwok *pōtol*; Hokan: Washo *(d-)ībis* 'vagina,' Karok *vīθ,* Diegueño
hapīčatt, Tequistlatec *(la-)bešuʔ*; Chibchan-Paezan: Move *butie,* Paya
pɛta-is-tapcca 'anus,' Chimu *pot,* Ayoman *busi* 'vagina,' Allentiac *poru*;
Andean: Quechua *upiti* 'anus,' Yamana *pūta* 'hole,' Aymara *pʰutʰu*;
Macro-Tucanoan: Gamella *sebu* 'vulva,' Uaiana *mbitikope* 'anus,' Uasöna
hibitikope; Equatorial: Guahibo *petu* 'vagina,' Guayabero *sil-fʰuta* 'vulva,'
Kandoshi *apčir(-ič),* Toyeri *apuit* 'vagina,' Wachipairi *ped,* Piapoko *afʰuta-
ni* 'buttocks,' Tariana *pāti-niawa* 'vagina,' Warakena *pēde* 'clitoris,' Ca-
ranga *piče* 'vulva,' Uro *piši,* (cf. also such Equatorial forms as Siusi
tˢu-pote 'vagina,' Campa *sibiči* 'vulva,' *šibiči* 'penis,' Uro *šapsi* 'genital
organ'); Macro-Carib: Jaricuna *poita* 'vagina,' Pimenteira *pütze-maung,*
Waiwai *boči* 'pubic hair,' Motilon *pirri* 'penis'; Macro-Panoan: Cavineña

busu-kani 'anus,' Tagnani *opet*, Tiatinagua *besi* 'penis,' Panobo *buši*,' Lule *pesu*; Macro-Ge: Mekran *putote*. [AM 263, EQ 121, AMN]

22 TEKU 'leg, foot'

NIGER-CONGO: Konyagi *-tak* 'heel,' Gurmana *-duge*, Jarawa *-dudug-ul*, Kikuyu *-togigo*. [HJ II]

NILO-SAHARAN: Proto-Kuliak **tak'a* 'foot, shoe,' *takw* 'step on, tread on,' So *tɛg* 'foot'; Saharan: Daza *dige* ʼleg,' Kanuri *dəŋgʌl* 'wade,' Kanembu *dõ ∼ duu* 'leg,' Berti *taki* 'thigh,' Karda *dìgì* 'foot.' [VB, NSB]

AFRO-ASIATIC: Omotic: Male *toki* 'leg,' Koyra *toke*, Kachama *tuke*, Bambeshi *tugɛ* 'foot,' Nao *tego* 'to go,' Dime *tiŋgo*; Cushitic: Proto-East Cushitic **tāk-*, Somali *tag-* 'to go,' Dahalo *ḏaka'a* 'foot'; Chadic: Proto-West Chadic **tak-* 'to walk with somebody, accompany,' Muzgum *túgu* 'foot,' Gollango *taħ* 'to go.' [VB, LN 255, OS 166]

DRAVIDIAN: Proto-Central Dravidian **tāk* 'to walk,' Parji *tāk*, Pengo *tāŋ(g)*, Kui *tāka*. [D 3151, LN 255] Cf. also Telugu *ḍekka* 'hoof,' Naikri *ḍekka*, Konda *ḍeka*, Kuwi *dekka*. [D 2970]

CAUCASIAN: Proto-Caucasian **t'Hălq'ʷV* 'part of the leg,' Proto-East Caucasian **t'ʷehʷV* 'foot,' Proto-Dido **t'ɨq'ʷV* 'sole of the foot,' Proto-Lezghian **t'elq'ʷI* 'shin, ankle.' [C 196]

NA-DENE: Proto-Eyak-Athabaskan **t'àx ∼ *t'àh* 'foot.' [DC]

INDO-PACIFIC: Tasmanian *tokăna* 'foot'; Timor-Alor: Abui *tuku* 'leg, foot'; Halmahera: Ternate *tagi* 'to walk'; Central Melanesian: Savo *tetegha* 'foot, lower leg'; Tasmanian: Northeast *tage(-na)* 'to walk,' North *taka(-ri)*, Southeast *taga(-ra)*; North New Guinea: Arso *taka* 'foot'; Southwest New Guinea: Marind *tagu* 'to walk,' Telefol *tek* 'to go'; South New Guinea: Mombum *itögh* 'foot,' Bara *togoi* 'leg'; Central New Guinea: Ekari *togo* 'to walk,' Matap *tag* 'hip'; East New Guinea: Jegasa Sarau *tegi* 'foot.' [IP 80, T 458]

AMERIND: Almosan-Keresiouan: Mandan *dok'a* 'leg,' Hidatsa *idiki*; Penutian: Siuslaw *tsīkʷ* 'foot,' North Sahaptin *təχp* 'with the foot,' Nez Perce *teχéʔp* 'foot,' Wintu *t'ek-* 'move,' Mixe *tek* 'foot,' Huastec *tˢehet* 'upper leg'; Hokan: Jicaque *tek* 'leg'; Chibchan-Paezan: Borunca *tek ∼ dek* 'walk,' Move *dikeko*, Atanque *dukakana* 'leg,' Baudo *tači-kini* 'foot'; Andean: Simacu *tixea* 'foot,' Yahgan *kadek* 'walk'; Macro-Tucanoan: Tiquie *do(γ)* 'leg,' Wanana *dexso* 'thigh'; Equatorial: Tinigua *diki* 'foot,' Piaroa *tsihẽpẽ*, Wapishana *čikep* 'walk,' Arawak *adikki-hi* 'footprint,' Miguri *guateke* 'walk,' Guayabero *tuk* 'foot,' Yurucare *tekte* 'leg,' Guahibo *taxʋ* 'foot'; Macro-Carib: Bora *take* 'leg,' Andoke *(ka-)dekkhe* 'foot'; Macro-Panoan: Cavineña *edači*, Panobo *taeg*, Mayoruna *taku*, Amahuaca *taku*; Macro-Ge: Oti *etage* 'leg,' Cotoxo *täxkatse*, Camican *tako-emaŋ* 'walk,' Proto-Ge **tɛ* 'leg.' [AM 165, AMN]

23 TIK 'finger; one'

NIGER-CONGO: West Atlantic: Fulup *sik* ∼ *sex* 'finger,' Nalu *te*; North-Central Niger-Congo: Gur *dike* '1'; South-Central Niger-Congo: Gwa *dogbo,* Fon *ɗòkpá* Ewe *ɗèká*; Bantu: Tonga *tiho* 'finger,' Chopi *tˢiho,* Ki-Bira *zika,* Ba-Kiokwa *zigu.* [KS 55, UOL 91, HJ II: 295]

NILO-SAHARAN: Fur *tɔk* '1,' Maba *tək,* Dendje *doko* 'ten,' Nera *ɗɔkk-u* '1,' Merarit *tok* 'ten,' Dinka *tok* '1,' Berta *ɗúkóni,* ?Mangbetu *t'ɛ,* Kwama *seek-o,* Bari *to,* Jur *tok,* Twampa *ɗèʔ,* Komo *ɗé.* [NS 103, CN 72, ES 83, KS 55, UOL 91, NSB]

AFRO-ASIATIC: Proto-Afro-Asiatic **tak* '1'; Semitic: Peripheral West Gurage *təgu (əmmat)* 'only 1'; Cushitic: Oromo *toko* '1,' *takku* 'palm (of hand),' Yaaku *tegei* 'hand,' Saho *ti* '1,' Bilin *tu,* Tsamai *dōkko*; Berber: Nefusa *tukoɗ* 'finger'; Chadic: Hausa *(ɗaya) tak* 'only 1,' Gisiga *tēkoy* '1,' Gidder *te-teka,* Logone *tku* 'first.' [AAD 3: 10]

INDO-EUROPEAN: Proto-Indo-European **deik* 'to show, point,' **dekm̥* '10'; Italic: Latin *dig(-itus)* 'finger,' *dic(-āre)* 'to say,' *decem* '10'; Germanic: Proto-Germanic **taihwō* 'toe,' Old English *tahe* 'toe,' English toe, Old High German *zêha* 'toe, finger.' [IE 188, 191, EU]

URALIC: Votyak *odik* '1,' Zyrian *õtik.* [U 138, EU]

TURKIC: Chuvash *tek* 'only, just,' Uighur *tek* 'only, merely,' Chagatai *tek* 'only, single,' Turkish *tek* 'only,' *teken* 'one by one.' [EU]

KOREAN *(t)tayki* '1, thing,' *teki* '1, guy, thing,' Old Korean *tēk* '10.' [EU]

JAPANESE-RYUKYUAN: Japanese *te* 'hand.' [UOL 195]

AINU *tek* ∼ *teke* 'hand,' *atiki* 'five.' [UOL 195, EU]

GILYAK *řak* 'once.' [EU]

CHUKCHI-KAMCHATKAN: Kamchadal *itygin* 'foot, paw.' [EU]

ESKIMO-ALEUT: Proto-Eskimo-Aleut **q(i)tɨk* 'middle finger'; Eskimo: Kuskokwim *tik(-iq)* 'index finger,' Greenlandic *tik(-iq)* 'index finger,' *tikkuagpaa* 'he points to it'; Aleut: Attu *tik(-laq)* 'middle finger,' *atgu* 'finger,' *taɣataq* '1,' Atka *atakan.* [EU, EA 121]

YENISEIAN: Proto-Yeniseian **tok* 'finger.' [VT]

SINO-TIBETAN: Archaic Chinese **t'i̯ek* 'single, 1'; Tibeto-Burman: Proto-Tibeto-Burman **tyik* '1,' Rai *tik(-pu),* Tibetan *(g-)tśig.* [ST 94]

NA-DENE: Haida *(s-)tˡa* 'with the fingers'; Tlingit *tˡ'eeq* 'finger,' *tˡek* '1'; Eyak *tikhi*; Athabaskan: Sarsi *tlik'-(aza),* Kutchin *(ĩ-)ɬag,* Hupa *ɬaʔ,* Navajo *ɬàʔ.* [ND]

INDO-PACIFIC: Tasmanian: Southern *motook* 'forefinger,' Southeastern *togue* 'hand'; West New Guinea: Proto-Karonan **dik* '1'; Southwest New Guinea: Boven Mbian *tek* 'fingernail,' Digul *tuk.* [IP 37, SWNG 39, SNG 42, UOL 195]

Austroasiatic: Proto-Austroasiatic *(k-)tig 'arm, hand'; Munda: Kharia *tiʔ*; Mon-Khmer: Riang *tiʔ*, Wa *taiʔ*, Khmer *ṭai*, Vietnamese *tay*, Proto-Aslian *tik ∼ *tiŋ. [PB 467, UOL 195]

Miao-Yao: Proto-Miao-Yao *ntoʔ 'finger'; Proto-Yao *doʔ; Proto-Miao *ntai 'point with the finger.' [PB 356]

Daic: Proto-Li *dliaŋ 'finger,' Northern Li *tleaŋ ∼ theŋ*, Loi *thɛŋ ∼ ćiaŋ*. [PB 356]

?Austronesian: Proto-Austronesian *(tu-)diŋ 'point with the finger.' [AN 140, WW 156, PB 356, UOL 195]

Amerind: Almosan-Keresiouan: Nootka *takʷa* 'only,' Bella Coola *tˢ'iʔxʷ* 'five,' Kalispel *tˢ'oqʷ* 'point with the finger,' Kwakwala *sokʷ* 'five,' Nitinat *-tsoq-* 'in hand,' Cherokee *sakwe* '1,' Acoma *ʔiskaw*, Pawnee *uska*, Mohawk *tsiʔer* 'finger,' Hidatsa *šaki*, Winnebago *sāk*, Quapaw *čak*, Biloxi *ičaki* 'fingers,' Yuchi *saki* 'hand'; Penutian: Southern Sierra Miwok *tˢik'aʔ* 'index finger,' Wintun *tiq-eles* '10,' Nisenan *tok-* 'hand,' Mixe *toʔk ∼ tuk'* '1,' Sayula *tuʔk*, Tzeltal *tukal* 'alone,' Quiche *tik'ex* 'carry in the hand,' Hokan: Proto-Hokan *dɨk'i* 'finger,' Karok *tīk* 'finger, hand,' Achumawi *(wa-)túči* 'finger,' Washo *tsek*, Yana *-tˢ'gi-* 'alone,' East Pomo *bī'ya-tsūkai* 'finger,' Arraarra *teeh'k* 'hand,' Pehtsik *tiki-vash*, Akwa'ala *ašit-dek* '1'; Central Amerind: Nahua *tˢïikiaʔa*, Pima Bajo *čīč*, Tarahumara *sika* 'hand,' Mazatec *čikaʔã* 'alone,' Mangue *tike* '1,' Cuicatec *dīči* '10'; Chibchan-Paezan: Chibcha *ytiquyn* 'finger,' *ačik* 'by ones,' Borunca *e'tsik* '1,' Guatuso *dooki*, Shiriana *ĩthak* 'hand,' Ulua *tinka-mak* 'finger,' Paez *tɛɛč* '1,' Allentiac *tukum* '10,' Warrau *hisaka* 'finger, 1'; Andean: Cahuapana *itekla* 'finger, hand,' Jebero *itökla*, Alakaluf *tākso* '1,' Quechua *sōk*; Macro-Tucanoan: Siona *tekua*, Siona *teg-li* '5,' Canichana *eu-tixle* 'finger,' Ticuna *suku* 'hand,' Yupua *di(x)ka* 'arm,' Uasöna *dikaga*; Equatorial: Upano *tˢikitik* '1,' Aguaruna *tikiǰ*, Murato *tˢiči* 'hand,' Uru *tˢī* '1,' Chipaya *zek*, Itene *taka*, Guamo *dixi* 'finger,' Katembri *tika* 'toe,' Yuracare *teče* 'thumb'; Macro-Carib: Kukura *tikua* 'finger,' Accawai *tigina* '1,' Yagua *teki*; Imihita *meux-tsekoa* 'finger,' Trio *tinki* '1,' Ocaina *dikabu* 'arm'; Macro-Panoan: Mataco *otejji* '1,' Tagnani *etegueno* 'finger,' Sensi *(nawiš)-tikoe* '1 (finger)' Cavineña *eme-toko* 'hand,' Moseten *tak* '10'; Macro-Ge: Botocudo *(po-)čik* '1 (finger),' *ǧik* 'alone,' Proto-Ge *(pɨ-)tˢï* '1 (finger).' [AM 110, MT 1, DL 56, AMN]

24 TIKA 'earth'

?Niger-Congo: Proto-Bantu *tàkà 'earth, mud, ground, soil,' Swahili *taka* 'dirt, refuse.' [BA IV: 87]

?Nilo-Saharan: Berta *adok'o(ŋ) ∼ atok'o(ŋ)* 'mud.' [Bender 1989]

KARTVELIAN: Proto-Kartvelian *tiqa ~ *diqa 'soil, clay,' Georgian *tixa* 'clay,
dirt' (< Old Georgian *tiqa*), Mingrelian *dixa* ~ *dexa* 'soil, earth,' Chan
(n)dixa 'soil.' [KA 94, N 69]

INDO-EUROPEAN: Proto-Indo-European *dhghem* 'earth'; Anatolian: Hittite
te-e-kan; Indic: Sanskrit *kṣam*; Iranian: Avestan *zå̄* Albanian *dhe*; Italic:
Latin *humus*; Celtic: Old Irish *dū* 'place'; Baltic: Latvian *zeme* 'earth';
Slavic: Old Church Slavic *zemlja*; Tocharian: Tocharian A *tkaṃ*. [IE 414,
N 69]

DRAVIDIAN: Tamil *tukaḷ* 'dust,' Telugu *dūgaṟa* 'dust, dirt,' Kolami *tūk* 'dust,
earth, clay,' Naikri *tuk* 'earth, clay,' Parji *tūkud* 'earth, clay, soil,' Gadba
tūkuṟ 'earth, clay.' [D 3283]

JAPANESE-RYUKYUAN: Old Japanese *tukï* 'mud,' *tuki* 'land' (mod. *t^{s}uki* ~
t^{s}uči). [SY]

BURUSHASKI *tīk* ~ *tik* 'earth, ground.' [B 351]

YENISEIAN: Proto-Yeniseian *təq- 'clay, dirt,' Ket *tag-ar* 'clay,' Kot *t^{h}ag-ar*
'dirt.' [SC 76]

SINO-TIBETAN: Lushei *diak* 'mud,' Sho *d^{h}ek* ~ *dek*' 'earth.' [IST 221]

NA-DENE: Haida *t^{l}ig* ~ *t^{l}ga* ~ *klik* 'earth, ground' (cf. TIK 'finger' above
for a similar shift of *t* > *t^l* before *i*); Tlingit *(t^{l}it-)tik* ~ *t^{l}iak-ū* ~ *klatk*
'earth'; Eyak (Yakutat) *(tza)t^{l}kh* 'earth.' [ND]

NAHALI *t^{s}ikal* ~ *sikal* 'earth.' [NA 67; probably a borrowing of Kurku *t^{s}ikal*
'mud,' according to Kuiper.]

AMERIND: Almosan-Keresiouan: Bella Bella *təq'^{w}um* 'dirty,' Nootka
t^s'ak'umt^s 'earth,' Kwakwala *dzəqwa* 'mud,' Squamish *tíq^w* 'muddy,' Lower
Fraser *s-t'iqəl*, Seneca *-tki-* 'dirty,' Yuchi *s'ak'ɔ̃* 'mud,' Hidatsa *iḥatsaki*
'dirty,' Acoma *há?at^s'i* 'land'; Penutian: Tsimshian *ma?tks* 'dirty,' Pokon-
chi *t^{s}ikot,* Mam *čokš* 'earth,' Mixe *mə?əts* 'mud,' Sayula *mo?ts,* Ixil *šok'ol,*
Quiche *šoq'ox* 'muddy'; Hokan: Shasta *t^s'ik* 'mud,' Achomawi *teqade*
'earth,' Diegueño *taketak* 'dirty'; Central Amerind: Cora *t^{s}i?it^{s}a,* Hopi
tīt^{s}kïa 'earth,' Chatina *t^{s}uuh* 'dirty,' Proto-Central Otomi *t^s'o,* Chi-
nantec *suh* 'dirt'; Chibchan-Paezan: Xinca *tuxa* 'mud,' Binticua *tikan,*
Bribri *ičuk* 'earth,' Rama *taki,* Cabecar *du-čeka* 'mud,' Guambiana *čig,*
Alllentiac *toko,* Cayapa *tu* 'earth'; Andean: Quechua *č'iči* 'dirty,' Pe-
huelche *atek* 'earth,' Tehuelche *takhs* 'dirty'; Macro-Tucanoan: Papury
tixsa, Yupua *tīxta* 'earth,' Tucano *dixta,* Särä *sixta,* Canichana *ni-čixiči,*
Nadobo *togn* 'mud'; Equatorial: Tinigua *tokwana* 'earth,' Caranga *t^{s}uxt^{s}i*
'dirty,' Chamicuro *t^{s}ixta* 'earth,' Cocoma *tuguka*; Macro-Carib: Yabarana
ašikipe 'dirty,' Witoto *sagope* 'mud'; Macro-Panoan: Toba-Guazu *toko*
'dirty,' Lengua *atits,* Chulupi *tīš* 'wet ground,' Tacana *ači* 'dirty'; Macro-
Ge: Chiquito *tuki-s,* Bororo *txu,* Chavante *tika* 'earth,' Apinage *tugu*
'dirty,' Cayapo *tuk.* [AMN]

25 TSAKU 'leg, foot'

?NIGER-CONGO: Bantu: Proto-Bantu *tˢàkù 'calf of the leg.' [BA 79]

NILO-SAHARAN: East Sudanic: Jur *čok* 'foot,' Zilmamu *šowa* 'foot,' Nera *šokna* 'foot, claw,' Proto-Dinka-Nuer *tˢok* 'foot'; Gumuz: Proto-Gumuz *tˢogwa*, Proto-Koman *šok*, Komo *šawkʰ*, Twampa *šòg*, Kwama *sɔŋk'*. [VB, NSB]

AFRO-ASIATIC: Cushitic: Beja *sikwina* 'foot,' Quara *sukanā*; Semitic: Hebrew *šoq* 'leg,' Arabic *sāq*; Berber: Shilha *(ta-)zux(-t)* 'foot'; Chadic: Proto-West Chadic *sAkA* 'leg,' Bolewa *šeke* 'foot,' Fali *sika*. [CS 265, AA 34, OS 292]

INDO-EUROPEAN: Indic: Sanskrit *sak(-thi)* 'thigh'; Iranian: Avestan *hax(-ti)*; Celtic: Welsh *heg(-ol)* 'leg, shank.' [IE 930]

URALIC: Yukaghir *tˢoɣ(-ul)* 'foot, leg'; Ugric: Ostyak *săg(-ə́nt')* ∼ *soh(-ət')* ∼ *śog(-əś)* 'back side of the leg from the heel to the bend of the knee (of a human being); back hoof (of a horse); Finnic: Saami *čæwǧa* ∼ *čæwǧe* 'hock of reindeer or other quadruped.' [U 92]

CHUKCHI-KAMCHATKAN: Kamchadal *tˢk(-ana)* ∼ *tˢki* 'foot, leg, paw.' [Swadesh 1962]

CAUCASIAN: Proto-Caucasian *č'V̲[l]k'ʷV 'foot, hoof,' Proto-Avar-Andi *c̄'ik'ʷa 'foot.' [C 75, DC]

BURUSHASKI: Hunza *šʌk* 'arm, forearm (of a human being); thigh, upper part of the leg (of an animal),' Werchikwar *šʌk*. [B 320, W 215]

?SINO-TIBETAN: Ancient Chinese *tsⁱwok 'foot,' Cantonese *tṣuk*.

INDO-PACIFIC: Andaman Islands: Onge *tˢige* 'leg,' Biada *tˢag*, Puchikwar *tˢok*, Juwoi *čok*; Central New Guinea: Mikaru *saga* 'foot,' Grand Valley Dani *(ne-)sok* '(my) foot'; East New Guinea: Korona *sogo* 'foot,' Sikube *suku*, Mafulu *soge*, Kambisa *suga*. [IP 80, T 458]

AUSTROASIATIC: Munda: Kharia *dᶻuŋ* 'foot'; Mon-Khmer: Mon *tˢöŋ* 'foot, leg,' Khmer *dᶻɤŋ* 'leg, foot,' Temiar *dᶻoŋ* ∼ *dᶻukⁿ*, Mah Meri *dᶻogn*, Shompen *čuk* 'foot.' [VB]

AMERIND: Almosan-Keresiouan: Proto-Algic *-sō̄ʔk-ani ∼ -šō̄ʔk-ani 'hip,' Kutenai *saq'* 'leg,' Quileute *t-tˢ'oqʷ* 'foot,' Squamish *-čq'* 'hip, side,' Okanagan *s-tˢ'ōqan* 'leg,' Yuchi *go-čuko* 'thigh'; Penutian: Nass *asāx* 'foot,' Siuslaw *tˢīkʷ*, Klamath *č'ōg* 'leg,' *bo-sak-l* 'thigh,' Lake Miwok *čúki* 'hip,' Wappo *čoke* 'hip bone,' Zuni *sakʷi* 'leg,' Atakapa *ʔaška* 'foot,' Huave *tsāk* 'leg,' Mam *čog*, Tzotzil *čakil* 'hip'; Hokan: Achomawi *šakō* 'leg,' Northern Pomo *šaku*, Eastern Pomo *šāko*, Kashaya *šahku*, Yana *dᶻūk'uwalla* 'hip,' Mohave *tˢakas*; Central Amerind: Mazatec *n-tˢaku* 'his foot,' Popoloca *tˢāgu* 'leg,' Mixtec *tˢaha* 'hip,' Ixcatec *tˢaku* 'leg,' Chocho *tˢagua*; Chibchan-Paezan: Tarascan *tˢika-hta-kua* 'thigh,' Murire *sokua-*

gete, Sabanero *suaguet* 'leg,' Binticua *jŭkue,* Andaqui *sogua-para* 'foot,'
Itonama *uj-sahua-no* 'leg,' Jirajira *a-sagan-ipipo,* Timucua *secah*; An-
dean: Proto-Quechuan **čaki* 'foot,' Yahgan *čikan* 'leg,' Alacaluf *čekur*
'foot'; Macro-Tucanoan: Särä *tsagalo* 'thigh,' Buhugana *sakalo,* Yuri
sokehry 'hip'; Equatorial: Campa *no-tsaki,* Piaroa *tsiha* 'thigh,' Mocochi
čuko 'leg,' Otomi *čučuga* 'thigh,' Chapacura *čiki-či* 'foot'; Macro-Carib:
Trio *sako* 'leg,' Mocoa *saku,* Ocaina *ïʔžóóga* 'foot'; Macro-Panoan: Toba-
Guazu *čagañi* 'thigh,' Cavineña *etsaka* 'leg,' Sapiboca *ečuxu* 'thigh';
Macro-Ge: Botocudo *žäk-merum* 'tibia,' Masacara *šüöku* 'leg,' Kaingan
(in)-tˢo '(my) leg.' [AM 165, AK 113, CP 114, AIW, PP 133, AMN]

26 TSUMA 'hair'

KHOISAN: !Kung *čum* 'shell,' *š'um* 'skin,' Eastern ≠Hua *č'ū* ∼ *tˢ'ū* ∼ *dtˢ'ū*
  'skin'; G//abake *čā* ∼ *čo* 'skin'; /Xam *tũ* 'shell.' [SAK 597, 807]
NILO-SAHARAN: Nyangiya *sim-at* 'hair,' Nandi *sum.* [KER 445]
AFRO-ASIATIC: Omotic: Proto-Omotic **somm-* 'pubic hair'; Cushitic: Sidamo
  šomb-, Proto-Southern Cushitic **seʔem-* 'hair'; Old Egyptian *zmꜣ;* Se-
  mitic: Proto-Semitic **šmġ* 'fine hair shed by a camel'; Chadic: Hausa
  suma 'growth of hair.' [OL 47, CCE]
CAUCASIAN: Proto-Caucasian **tˢ'h̥ wĕme* 'eyebrow,' Proto-Lezghian **tˢ'ʷem,*
  Proto-Nax **tˢ'a-tˢ'ʔVm.* [C 70]
BASQUE *zam-ar(r)* 'lock of wool, shock of hair.' [SC 12]
YENISEIAN: Proto-Yeniseian **tˢəŋe* 'hair.' [SC 12]
SINO-TIBETAN: Proto-Sino-Tibetan **tˢʰām* 'hair'; Archaic Chinese **sam* ∼
  *ṣam 'hair, feather'; Tibeto-Burman: Proto-Tibeto-Burman **tsam* 'hair,'
  Lepcha *ătsom,* Tibetan *(ʔag-)tshom* 'beard of the chin' (= [mouth]-hair),
  Kanauri *tsam* 'wool, fleece,' *(mik-)tsam* 'eyebrow' (= [eye]-hair), Magari
  tśham 'hair, wool,' Burmese *tsham,* Lushei *sam* 'hair (of the head),' Dhi-
  mal *tśam* 'hide, bark,' Garo *mik sam* 'eyebrow,' Nung *əŋsam* 'hide.' [ST
  73, 191, UOL 194, SS 23]
MIAO-YAO: Proto-Miao-Yao **śjām* ∼ **sjām* 'beard, moustache.' [PB 307]
AMERIND: Almosan-Keresiouan: Pawnee *ošu* 'hair,' Dakota *šũ* 'feather,' Woc-
  con *summe* 'hair'; Penutian: North Sahaptin *šəmtai* 'pubic hair,' Nez
  Perce *simtey,* Kekchi *tˢutˢum* 'feather,' *ismal* 'hair,' Mam *tsamal,* Quiche
  isumal; Hokan: Proto-Hokan **ĉʰemi* 'fur,' North Pomo *tˢime* 'hair,' Ka-
  shaya *sime* 'body hair, fur,' Northeast Pomo *čʰeme* 'body hair,' Mohave
  sama 'root,' Cocopa *išma* 'hair,' Tlappanec *tˢũŋ* 'hair, root'; Central
  Amerind: Tubatulabal *tˢomol* 'hair, head'; Chibchan-Paezan: Matagalpa
  susum 'beard,' Xinca *susi* 'beard'; Andean: Tsoneka *čomki* 'pubic hair,'
  Quechua *sunkʻa* 'beard'; Equatorial: Caranga *čuma* 'hair,' Quitemo *čumi-
  či,* Aguaruna *susu* 'beard,' Candoshi *sosi.* [AM 136, EQ 54, UOL 194, DL 4,
  AMN]

27 ʔAQ'WA 'water'

KHOISAN: Northern: !o !kung *kã̃ũ* 'to rain,' !kung *k"ā* 'drink'; Central: Naron *k"ā* 'drink'; Southern: /kam-ka !ke *k"wã ∼ k"wẽ* 'drink,' *kã́ũ* 'to rain,' //ng !ke *k"ã̃ ∼ k"ẽĩ* 'drink,' *kãũ* 'to rain,' Batwa *k"ã̃ ∼ k"ẽ* 'drink,' /auni *k"āa* 'drink,' Masarwa *k"ã̃* 'drink,' /nu //en *k"ã̃* 'drink.' [KE 261]

NILO-SAHARAN: Fur *kɔí* 'rain'; East Sudanic: Nyimang *kwe* 'water,' So *kwɛʔ*, Ik *čuɛ*; Central Sudanic: Mangbetu *éguo*; Berta *kɔ̀i* 'rain, cloud'; Koman: Kwama *uuku* 'water,' Anej *agu-d* 'cloud.' [NSB, KER]

AFRO-ASIATIC: Proto-Afro-Asiatic (Illich-Svitych) **ʻq(w)* 'water,' (Ehret) **ak'ʷ-*; Omotic: Proto-North Omotic **ak'-*, She *k'ai* 'wet,' Janjero *ak(k)a* 'water,' Kaffa *ačō*, Mocha *āč'o*, Gofa *haččā*, Shinasha *ač'č'o*, Badditu *wat^s'ē*; Cushitic: Proto-Cushitic (Ehret) **-k'ʷ-* 'to be wet,' (Illich-Svitych) **ʻqw* 'water,' Agaw *aqʷ*, Bilin *ʻaqʷ*, Xamir *aqʷā* 'drops of water,' Damot *ag^wo* 'water,' Proto-East Cushitic (Ehret) **k'oy-* 'wet,' Hadiyya *wo'o* 'water,' Tambaro *waha*, Sidamo *waho*, Iraqw *āha* 'drink.' [N 139, EU, AM 87, CE 348]

INDO-EUROPEAN: Proto-Indo-European (Pokorny) **akʷā-* 'water,' (Puhvel) **egʷ-*, (Bomhard) **ek'ʷ-*; Anatolian: Hittite *eku-*, Luwian *aku-*, Palaic *aḫ-* 'drink'; Italic: Latin *aqua* 'water'; Germanic: Gothic *ahwa* 'river'; Tocharian: Tocharian A *yok-* 'drink.' [IE 23]

URALIC: Proto-Uralic (Rédei) **yoka* 'river.' [R 99–100]

JAPANESE *aka* 'bilge water.' [JP 100]

AINU *wakka* 'water,' *ku* 'drink.' [JP 100]

CAUCASIAN: Proto-Caucasian **-V̱qV* 'suck,' Proto-Lezghian **ʔoχʷa* 'drink,' Lezghian *χʷa-l*, Agul *uχas*, Proto-Lezghian **ʔoq̄ʷa-* 'rain,' Lezghian *q̄ʷa-z*, Rutul *huʁʷas*, Tsakhur *joʁʷi*; Proto-Nax **-aq-* 'suck(le),' Chechen *-aq-* 'suck'; Proto-Dargi **-uq-* 'suck(le).' [C 3, 16]

?BURUSHASKI *hʌɣ-um* 'wet.'

SINO-TIBETAN: Proto-Sino-Tibetan **Ku* 'fluid, spill,' Newari *k^hwo* 'river,' Khaling *ku* 'water,' Kachin *k^hu*. [NSC 43]

INDO-PACIFIC: Awyu *okho* 'water, river,' Syiagha *okho* 'water,' Yareba *ogo*, Yonggom *oq*, Ninggirum *ok*. [FS 96, 134]

AUSTRALIAN: Proto-Australian **gugu* 'water.' [AC]

AMERIND: Almosan-Keresiouan: Proto-Central Algonquian **akwā* 'from water,' Kutenai *-qʷ* 'in water,' Quileute *kwāya'* 'water,' Snohomish *qʷaʔ*, Caddo *koko*; Penutian: Nass *ak^j-s*, Takelma *ugʷ* 'drink,' Wintun *wak'ai* 'creek,' Zuni *k'a* 'water,' Atakapa *ak*, Yuki *uk'*, Tetontepec *uuʔk* 'drink,' Yucatec *uk'* 'be thirsty'; Hokan: Chimariko *aqa* 'water,' Kashaya *ʔahqha* 'water,' *q'o* 'drink,' Seri *ʔax* 'water,' Diegueno *ʔaxā*, Quinigua *kwa*, Tonkawa *ʔāx*, Tequistlatec *l-axaʔ*; Central Amerind: Proto-Chinantec **gʷa*

'stream, river'; Chibchan-Paezan: Shiriana *koa* 'drink,' Chimila *uk-*, Binticua *agu,* Allentiac *aka* 'water'; Andean: Iquito *aqua,* Quechua *yaku,* Yamana *aka* 'lake'; Macro-Tucanoan: Auake *okõa* 'water, river,' Cubeo *oko* 'water,' Tucano *axko*; Equatorial: Amniape *äkü,* Quitemo *ako,* Uaraicu *uaka* 'wash,' Terena *oko* 'rain,' Chipaya *ax*[w] 'wash'; Macro-Carib: Yagua *xa* 'water,' Witoto *joko* 'wash,' Macushi *u-wuku* 'my drink,' Waiwai *woku* 'drink,' Taulipang *ai'ku* 'wet'; Macro-Panoan: Lule *uk* 'drink,' Mayoruna *uaka* 'water,' Culino *yaku* 'water,' *waka* 'river,' Huarayo *hakua* 'wash'; Macro-Ge: Koraveka *ako* 'drink,' Fulnio *waka* 'lake,' Kamakan *kwa* 'drink,' Chavante *kō* 'water,' Aponegicran *waiko* 'drink.' [AM 87, AMN]

ABBREVIATIONS

A   Andean, Greenberg 1987
AA   Afro-Asiatic, Greenberg 1963
AAD   Afro-Asiatic Dictionary, Diakonov 1981–
AB   Allan Bomhard, 1987
AC   A. Capell, 1956
AD   Anna Dybo, 1988
AIW   Mary Key, 1987
AK   Almosan-Keresiouan, Greenberg 1987
AM   Amerind, Greenberg 1987
AMN   Amerindian Notebooks, 23 vols., Greenberg 1981
AN   Austronesian, Dempwolff 1934–38
AT   A. N. Tucker and M. A. Bryan, 1957
B   Burushaski, Lorimer 1938
BA   Bantu, Guthrie 1967
BB   Barry Blake, 1988
BD   Bushman Dictionary, Bleek 1956
C   Caucasian, Nikolaev and Starostin 1992
CA   Central Amerind, Greenberg 1987
CAN   Central Amerind Notebook, Greenberg 1981
CCE   Vladimir Orel and Olga Stolbova, 1988
CE   Christopher Ehret, 1989
CK   Chukchi-Kamchatkan, Mudrak 1990
CN   Chari-Nile, Greenberg 1963
CP   Chibchan-Paezan, Greenberg 1987
CS   Marcel Cohen, 1947
D   Dravidian, Burrow and Emeneau 1984
DB   Dorothea Bleek, 1929
DC   Dene-Caucasian, Nikolaev 1991

DL	D. R. Leshchiner, 1989
EA	Eskimo-Aleut, Mudrak 1989
EC	East Caucasian, Starostin and Nikolaev 1975
EQ	Equatorial, Greenberg 1987
ES	East Sudanic, Greenberg 1963
EU	Eurasiatic, Greenberg to appear
FS	F. Seto, 1988
H	Hokan, Greenberg 1987
HF	Harold Fleming, ed., *Mother Tongue,* 1986–
HJ	Harry Johnston, 1922
IE	Indo-European, Pokorny 1959
IP	Indo-Pacific, Greenberg 1971
IS	V. M. Illich-Svitych, 1967
IST	Robert Shafer, 1974
JB	John Bengtson, 1986
JP	James Patrie, 1982
JR	Johannes Rahder, 1963
K	Khoisan, Greenberg 1963
KA	Kartvelian, Klimov 1964
KE	Khoisan Etymologies, Ruhlen 1987b
KER	Harold Fleming, 1983a
KS	Kongo-Saharan, Gregersen 1972
LC	Morris Swadesh, 1960
LN	Vaćlav Blažek, 1990
M	Mande, Mukarovsky 1966
MG	Macro-Ge, Greenberg 1987
MT	Macro-Tucanoan, Greenberg 1987
N	Nostratic, Illich-Svitych 1971–84
NA	Nahali, Kuiper 1962
NC	Niger-Congo, Greenberg 1963
ND	Na-Dene Notebook, Greenberg 1981
NK	Niger-Kordofanian, Greenberg 1963
NNG	North New Guinea, Greenberg 1971
NP	Norman-Paman, Black 1980
NS	Nilo-Saharan, Greenberg 1963
NSB	Nilo-Saharan, Bender 1980
NSC	Nostratic–Sino-Caucasian, Starostin 1991
NSD	Nilo-Saharan–Dravidian, Greenberg 1986
OL	Václav Blažek, 1989
OS	Olga V. Stolbova, 1987
P	Penutian, Greenberg 1987

PB   Paul Benedict, 1975
PP   Paul Proulx, 1984
R   Károly Rédei, 1986–88
RB   Robert Blust, 1980
RD   Robert Dixon, 1980
SAK   Southern African Khoisan, Ruhlen 1987b
SB   S. Bhattacharya, 1966
SC   Sino-Caucasian, Bengtson 1991a
SES   Southeast Surmic, Fleming 1983b
SM   Stuart Mann, 1984–88
SN   Sergei Nikolaev, 1991
SNG   South New Guinea, Greenberg 1971
SS   Sergei Starostin, 1984
ST   Sino-Tibetan, Benedict 1972
SUL   Björn Collinder, 1957
SWNG   Southwest New Guinea, Greenberg 1971
SY   S. Yoshitake, 1934
T   Tasmanian, Plomley 1976
TB   Tibeto-Burman, Matisoff 1985
U   Uralic, Collinder 1977
UOL   Alfredo Trombetti, 1905
VB   Václav Blažek, 1988
VT   V. N. Toporov, 1967
W   Werchikwar, Lorimer 1962
WM   Walter Müller, 1975
WP   Alois Walde and Julius Pokorny, 1930
WW   S. A. Wurm and B. Wilson, 1975
Y   Yeniseian, Starostin 1984

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